LONDON JOURNAL OF MEDICINE,

A MONTHLY

Record of the Medical Sciences.

JULY 1851.—No. XXXI.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON SOME OF THE COMPLICATIONS OF HERNIA; AND ON OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.

By R. R. ROBINSON, Esq., M.R.C.S.Eng., late President of the South London Medical Society, and formerly Surgeon to the London Dispensary.

(Concluded from page 447 of May Number, 1851.)

PART SECOND.

OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.

After the able papers upon Internal Intestinal Obstruction, published by Dr. Crisp[1] and Mr. Phillips,[2] and the interesting cases recorded by Dr. G. Bird, Mr. Hilton, and Mr. Druitt, it may seem presumptuous in me again to advert to the subject. As, however, the basis of this paper was written many years ago; as in many points the cases which have come under my care tend to confirm what Mr. Phillips has advanced; and as some points which I shall consider have not been so fully alluded to, either by him or the other authors whom I have quoted, I have determined to submit the following paper to the notice of the profession, in the hope that it will not be found entirely devoid of interest.

The most perfect classification of these maladies, with which I am acquainted, is that of Rokitansky. He has divided internal strangulations into three species:—

1st. The narrowing or complete obliteration of the canal of a piece of intestine, resulting from pressure exerted upon it at one or more spots, by a larger or smaller portion of intestine or its mesentery, so as to compress it against the opposite side of the abdomen.

2nd. The rotatory species; which consists of the rotation of one part round the axis formed by some other part. In this class he in-

[1] Lancet, 1847.

[2] Med. Chir. Trans. vol. xxxi, p. 1..

cludes three sub-species: (*a*) rotation of a portion of intestine round its own axis; (*b*) round an axis formed of mesentery; (*c*) where a portion of intestine forms an axis, round which another large portion with its mesentery turns, so as to touch the periphery of the axis at every point.

3rd. That caused by some peculiar arrangement of parts, the results of original malformation or of previous disease.

These strangulations of the intestines, he observes, occur in circular or fissured spaces formed (*a*) by fibres or bands of cellular membrane running from one organ to another; (*b*) by adhesions of the free end of the vermiform appendix to some part of the walls of the abdomen, or to a portion of intestine or mesentery; (*c*) by adherent diverticula; (*d*) by the adhesion of two convolutions at a single point; (*e*) by perforations in the mesentery, or by fissures in an omentum altered by disease.[1]

It is not, however, my intention to enter into a consideration of all the conditions which may cause internal intestinal obstruction, but to confine my observations to the following points:—

I. Obstruction from contraction of the intestine.

II. Obstruction from membranous bands.

III. Obstruction from the calibre of the intestine being girt round by the omentum or the mesentery, one portion of intestine being twisted upon another.

IV. Obstruction from a combination of the two last-mentioned causes; a twisting of the bowel, and preternatural adhesion by membranous bands.

I purpose to consider the subject under the following heads:—1. The appearances met with on dissection. 2. The Causes. 3. The Symptoms. 4. The Cause of Death. 5. The Prognosis. 6. The Diagnosis. 7. The Treatment.[2]

MORBID APPEARANCES.

I. Contraction of the Coats of the Intestine. Contraction is not an unfrequent morbid condition of serous membranes. It is frequently seen in the pleura, especially where vomicæ, situated near the exterior of the lung, have discharged themselves and cicatrized. It is occasionally seen in the spleen, and very often in the peritoneal coat of the bowels. I have also remarked it in those who have died a few days after the operation for strangulated hernia; in Case XII, the very great contraction observable in the ileum was apparently owing solely to this cause. The following is an abstract of the dissection in that case. The jejunum and upper part of the ileum were enormously distended, partly by yellow liquid fæcal matter, but principally by flatus; a stricture (Fig. 1), formed apparently *by contraction* of the peritoneal coat, without any thickening, existed in the ileum, near its middle: the calibre of the gut in this situation would not admit a large pea. The lower half

[1] Chelius' Surgery, by South, vol. ii, p. 94; and Rokitansky's Pathological Anatomy; translated for the Sydenham Society by Dr. Sieveking, vol. ii, pp. 51-2.

[2] Although, for the facility of description, I have arranged my remarks in the form of a general essay, I am desirous of stating, that the inferences I have drawn have been derived solely from the cases appended to the paper, and those to which I have from time to time alluded; and I wish them to be applied generally *only* in so far as more extended experience shall justify this application.

of this intestine was exceedingly contracted. The convolutions of the intestines were united together by bands of lymph; they were also adherent to the abdominal parietes, and were in many places approaching a sphacelated condition; for, on gently separating the unnatural adhesions, an opening was made into the gut. There was also an unnatural contraction of the muscular fibres in the centre of the transverse colon, but, by pressure, this part could be made as capacious as others. A question arises here,—did this contraction, met with in the ileum, exist at the time the patient was first attacked by peritonitis; or did it occur as a sequel to that affection? I incline, myself, rather to the first supposition, as the bowels were naturally costive, and as there was no thickening of the coats of the intestine, nor any *old* adhesions. I am the more strengthened in this view by a case which I have examined lately; in which a lady, dying at last rather suddenly from fright, after suffering long from phthisis and interlobular emphysema, was found to have the great omentum firmly united to the left side of the parietes of the abdomen; the greater part of the transverse colon was very much contracted throughout its whole length, and the descending colon was contracted precisely in the way in which the ileum was contracted in this case. There was no alteration in the tissue, and no apparent impediment to the passage of the motions; for although she had latterly been of a very costive habit, she had never had any obstinate constipation, and there was nothing like accumulation above the constricted part.

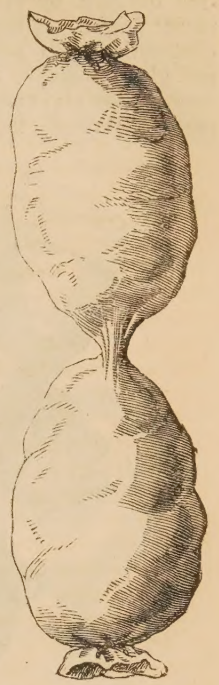

Fig. 1. Stricture of the bowel from contraction of the peritoneal coat.[1]

II. Obstruction from Membranous Bands. Of all the causes of internal obstruction, the formation of false membrane girting some part of the bowel, or preternaturally fixing it to the abdominal parietes, appears the most frequent. This is no doubt the result of inflammation existing some time previously. In Case xiii it will be perceived, that a considerable portion of the ileum towards its lower part, and not far from its termination, was surrounded by two false membranes, one of them of *extreme tenuity*, not much thicker than a thread, and in parts of a *black colour*. (Figs. 2 and 3.) This completely surrounded the gut, and very considerably diminished its area here. In Case xiv also, it is stated, that some of the folds of the ileum were agglutinated together, and tightly bound down to the peritoneum, covering the right iliac fossa, by strong and apparently long-standing membranous bands. In most cases, the adhesions seem to have been of old standing, especially

[1] The wood-cuts which illustrate this paper have been executed by Dr. Westmacott of King's College, from preparations in my possession, with the exception of Fig. 1, which is sketched from memory, and Figs. 2 and 3, taken from drawings by Mr. Hurst, from a preparation in Guy's Hospital Museum, through the kind permission of the Treasurer.

in those appended to this paper, and in Mr. Hilton's case;[1] but in that detailed by Mr. Druitt,[2] the inflammatory action was of more recent origin. It appears also, that *partial* is more likely to produce obstruction than *general* peritonitis; for where all the convolutions are glued together by false bands, although in some a *tendency* to constipation may ensue, in many cases no apparent interruption to the passage through the canal takes place. I remember a remarkable

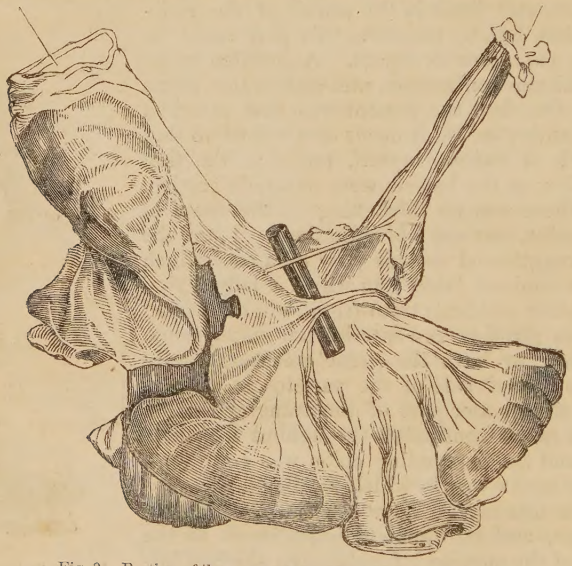

Fig. 2. Portion of ileum surrounded by membranous bands.

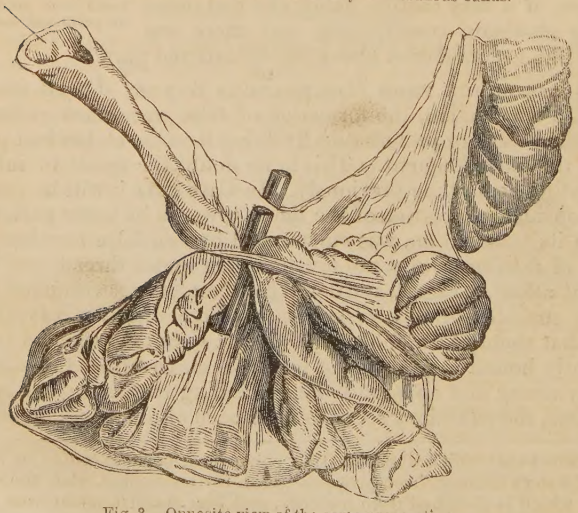

Fig. 3. Opposite view of the same preparation.

[1] Med. Chir. Trans., vol. xxx, p. 51. [2] Ibid., vol. xxxi, p. 245.

instance of this in a strong, healthy-looking old man, who underwent the operation of lithotomy, which proved fatal, and in whom all the convolutions were firmly bound together by strong old adhesions, but in whom no inconvenience had ever been complained of with respect to the bowels; and in Fig. 4, which represents general adhesions of the convolutions to each other, the result of strumous inflammation, leading to tubercular as well as albumino-fibrinous deposit, there was no constipation; and towards the close of life *diarrhœa* supervened.

Fig. 4. All the intestinal convolutions agglutinated together by strumous peritonitis.

The *situation* of these bands is an important point for consideration. In all the cases which I have seen, and in most of those of which I have read, the bands have been around the ileum or jejunum, especially the former; but no doubt they may occur elsewhere. It is natural to suppose that they would be more likely to be attended with urgent symptoms when embracing the small than the larger intestines; and the higher the obstruction, the greater *(cæteris paribus)* would be the distress produced, and the more imminent the danger; but experience does not altogether bear out that view.[1]

III. Mesenteric and Omental Obstruction. It occasionally happens that the bowel is twisted upon itself; and in that case, one portion of intestine is girt round by the mesentery of another, and the confusion of such folding is sometimes very great. No well-marked, uncomplicated case of this kind has occurred to myself: but in Case xv, for which I am indebted to a medical friend, it was found, after death, that a portion of omentum had grown around a knuckle of small intestine (a portion of the ileum), and had occasioned strangulation; so that when the omentum was turned back, the intestine was dragged

[1] Vide Symptoms, p. 604.

back with it; and in the *Medical Gazette*, three very interesting cases, of what he calls dislocation of the sigmoid flexure of the colon, are mentioned by Mr. Mackenzie. In whatever manner, he observes, the displacement is effected, the result is remarkably uniform; the intestine is thrown from its natural situation towards the centre of the abdomen, and receives a twist at its termination in the rectum, which causes complete obstruction of the passage; the small intestines get coiled round it in such a manner as to strangulate the gut by the free margin of the mesentery. In Case I, on opening the abdomen, an enormous viscus, of a dark colour, in a state of extreme distension, occupying the centre of the abdomen, half buried among the small intestines, which were also distended with gas, came into view. This proved to be the sigmoid flexure of the colon; at its termination in the rectum, it was found to have received a twist upon itself, giving rise to complete obstruction. The transverse arch of the colon was pressed towards the right side; all the *intestines were more or less inflamed*, except the rectum and twisted portion; the sigmoid flexure was in a gangrenous state, and on being opened, was found *filled* with cranberries and bloody sanies. In Case II, there were the same morbid appearances as in the former, except that the dislocated intestine occupied the right side, concealing from view the descending colon; and, instead of being twisted, it was tightly embraced by a turn and a half of the mesentery, by the free margin of which it was completely strangulated. A loop of small intestines had got entangled, and was also strangulated and gangrenous; the mesocolon lay in the shape of a long appendix amongst the intestines, quite saturated with extravasated blood. In Case III, the morbid appearances were precisely as in Case II, the sigmoid flexure being thrown to the centre of the abdomen, and at its termination in the rectum, being strangulated by a turn of the mesentery. The small intestines were found in a state of extreme distension, equalling the normal size of the colon, and highly inflamed, whilst the colon was found of normal size; the small intestines were perfectly empty, even of gas, and quite free from inflammation.[1]

IV. Obstruction from the Mesentery and Membranous Bands. It occasionally happens, that both of the causes last-mentioned above, occur in the same individual, and the difficulty and danger of the case are thereby increased. In Case XVI (Fig. 5), such a complication will be seen. The lower part of the ileum, towards its termination in the colon, was in a complete state of strangulation from bands and mesentery; the portion incarcerated consisted of two convolutions united together by bands of lymph, and that portion of the mesentery by which the principal stricture was formed, although very tightly embracing the bowel, was softened, and had *in part given way*.

Effects of Obstruction. Several ill consequences follow as the effects of stricture of the intestine. It may be so tight as to produce, not only congestion of all the tunics of the bowel some way above the constricted part, but softening, ulceration, and perforation,—hypertrophy, and distension of the bowel above the stricture—atrophy and contraction of all the portion below it—and partial or general peritonitis.

[1] Medical Gazette, vol. xli, p. 407.

Congestion of the Bowel above the Stricture. In only two of the cases (XIV and XVI) is there a distinct mention of congestion of the coats of the bowel above the stricture; but it is probable it might have existed in the others in so slight a degree as to escape notice. This appearance will much depend upon the tightness and duration of the obstruction, and the nature of the treatment to which the patient has been subjected.

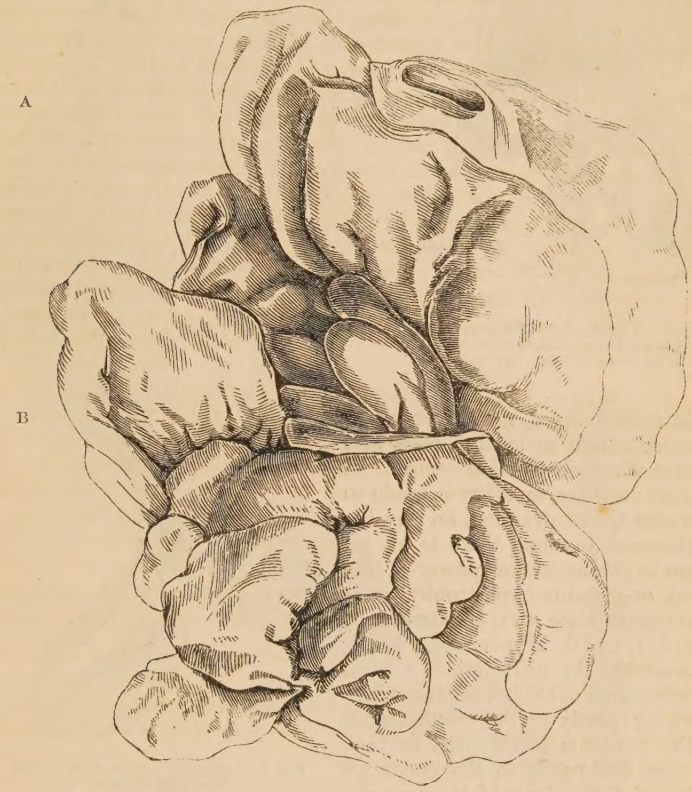

Fig. 5. Convolutions of the bowel strictured by false membrane and mesentery. A, the part above dilated; B, the band of mesentery forming the stricture.

Softening of the Mucous Membrane will be noticed in some of the cases appended to the paper; in one also, the mucous membrane is said to be ulcerated; but in none of the cases does perforation appear to have happened *before* death. No doubt it may occur from this as it does from other causes, but it is by no means usual; for the inflammation set up around the diseased part produces adhesion to the surrounding textures, and this effectually prevents it. It is more common, therefore, for all the parts to be softened, so as upon the least touch to give way, as happened in Case I, alluded to in the preceding page.

Hypertrophy and Distension of the Bowel above the Stricture. The same evidences of obstruction as are seen in other organs are seen in

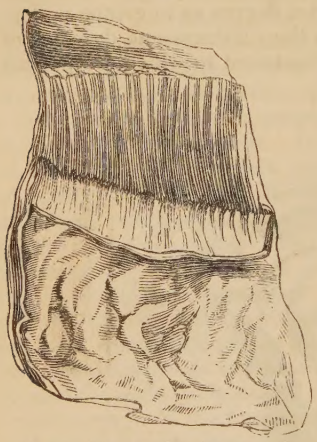

Fig. 6. Hypertrophy of the muscular coat of the bowel, to such an extent as to allow of its being torn into two layers.

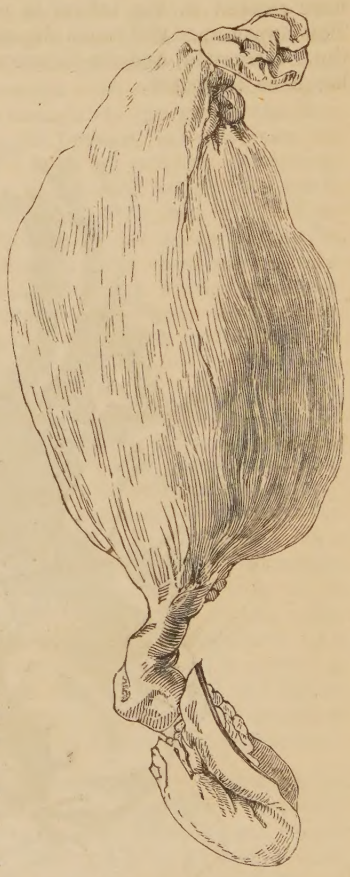

Fig. 7. Imperforate anus, with rectum distended above it.

the intestinal canal, not, however, to the same extent as in the heart and bladder when obstruction occurs. In the first instance, an effort is made to overcome the obstruction, and by the continuance of that, there is an increase in the muscular power of the bowel, or genuine hypertrophy, as is recorded in Case XVI, illustrated by Figs. 5, A, and 6. Hypertrophy failing to overcome the obstruction, a great augmentation of calibre occurs, which is owing partly to the accumulation of the contents interrupted in their passage, and partly to the decomposition of them, by which much gas is generated. Sometimes the distension is very great, as in Case XII, where the ileum is described as measuring *nine inches* in circumference. I have no preparation of this particular condition; but in Figs. 7 and 9, copies of preparations of imperforate anus, the same thing is very well illustrated.

Contraction and Paleness of the Bowel below the Stricture. There is a great contrast between that portion which is above and that below the stricture; the latter is generally pale, shrivelled, and smaller than natural, especially where the contraction has existed any time. In Case XIV it is stated, that this part was only *one-fourth* the size of that above it

Peritonitis may be general, or confined to some part; the latter appears to be most common, and sometimes it does not take place at all, as in Case XV, where it is mentioned that there was neither fluid nor any other inflammatory product. In most, it will be seen, that the effusion of fibrin was partial, and in only two of the cases was there any fluid found in the abdomen; in Case XVI there were two ounces only of serum; and in Case XIII, eight ounces of dark brown fluid, without lymph, were found in the general cavity. Sometimes, however, the peritonitis goes on to the purulent stage, the matter being occasionally confined in a circumscribed cavity, as in Case I, where it is recorded, that there was a large collection of pus in the right iliac fossa, which was contained in a distinct cyst of false membrane, formed by the agglutination of the lower part of the ileum, the cæcum, and the peritoneum, covering the right transversalis and iliacus internus muscles.

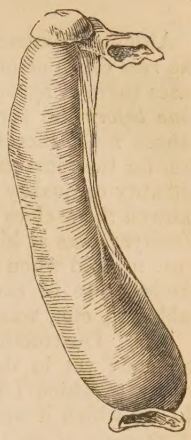

Fig. 8. The rectum of a full-grown fœtus in a natural state.

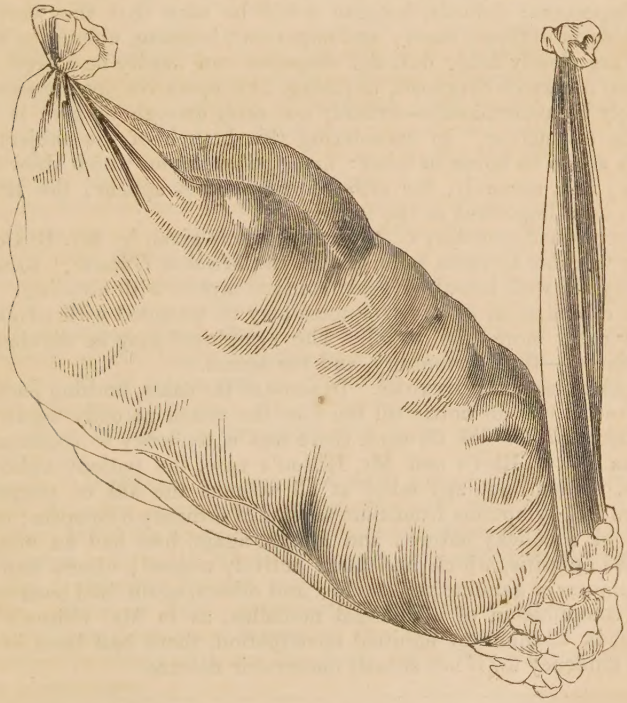

Fig. 9. Another preparation of imperforate anus, with the bladder in front. The distension of the bowel above the stricture is greater than in Fig. 7.

CAUSES.

Although contraction of the bowel and formation of bands, etc., are the *real* cause of obstruction, they are not the *sole cause;* for in many cases there is reason to believe that they had been in existence *some time before* the serious interruption to the canal took place; other causes must therefore exist to bring them into operation, and these are, for the most part, sudden and violent exercise, and errors in the quantity or quality of the food. Thus, in Case XIV, the symptoms showed themselves after lifting a weight; in Case XVI, while the man, a sawyer, was at his work as usual; in another case, soon after exposure to cold when dining out; and in Mr. Mackenzie's cases, the imprudent use of raw, indigestible substances, as cranberries, turnips, cabbages, etc., was suspected as the cause.

Age. Obstruction of the bowel from internal causes may occur at any age; yet in the cases which have come under my notice, and in others to which I have referred, the middle period of life has been that in which it was most frequently seen. Thus, two cases occurred at 20 years of age; one at 34; three at 40; one at 55; and one at 60.

SYMPTOMS.

I shall, in the next place, consider the symptoms to which the morbid conditions described give rise. This is a task both difficult and important; difficult, because it will be seen that they vary considerably in different cases; and important, because, unless the symptoms are clearly made out, the *diagnosis* can hardly be correct; and without a correct diagnosis, anything like operative interference can scarcely be undertaken,—certainly not *early* enough to give it a fair chance of success. In considering this branch of the subject, two things are to be borne in mind: first, the symptoms which show themselves; and, secondly, the *order* in which they appear; the latter, I think, is as important as the former.

A very good summary of the symptoms is given by Mr. B. Cooper, in his valuable lectures, published in the *Medical Gazette;*[1] to which, as they are well known, I shall content myself with alluding. As a closer examination of the symptoms may be attended with advantage, I will enter more into detail. The symptoms may be divided into two classes—the premonitory, and the actual.

Premonitory Symptoms. In some of the cases, nothing particular occurred to call for notice till the time the attack actually began; but in others, *all the life through,* there was a tendency to constipation; and in Dr. G. Bird's and Mr. Hilton's case, the patient, although a youth, seldom got any relief at all without the aid of purgatives. Others had symptoms from time to time of ordinary dyspepsia; others, pains of a colicky nature; and others, again, had had an attack of decided enteritis, which had been actively treated; others had been the subjects of genuine peritonitis; and others, again, had been subject to a complication of abdominal maladies, as in Mr. Hilton's case, where, in addition to habitual constipation, there had been in early life a tendency to, if not actual, mesenteric disease.

---

[1] Medical Gazette, vol. xlii, p. 607.

Actual Symptoms. In describing the symptoms which mark internal intestinal obstruction, I will enumerate them in the order in which, I believe, they most frequently occur.

Pain. This varies in kind, degree, and extent, in different cases. In some instances, it is described as a dull, heavy sensation; in some, as in Case xv, there is no pain at all; in others, it is universal; in some it appears to come and go, and is relieved by pressure, after the manner of colic; at others, it is constant and severe, as where the inflammation of the peritoneum is most active. In some instances, there is pain increased on pressure; but in others, that circumstance has not occurred. In some cases, there is a general uneasiness rather than pain; in other cases, the sensation is that of dragging; and in some *(a circumstance specially to be noted)*, there is pain in a situation *away* from the obstructed part; and again, there is pain both there and elsewhere.

Constipation. In almost every case there is constipation: but constipation is very often unattended to, as there is great difference in different persons in respect to the frequency with which the bowels are opened. This has been very well illustrated by Dr. Heberden, who says: "Homines frequentiâ alvum exonerandi plurimum inter se differunt. Alteri semel tantum singulis mensibus venter solutus est; alteri *duodecies* quotidie descendit per *triginta annos*, uti ipse mihi narravit, et dein septies quotidie per septem annos".[1] In these cases, however, the constipation cannot generally be overcome. It is true that by means of injection a small quantity of fæcal matter is brought away, but this is nothing more than sufficient to tinge the injection; now and then a large portion of hardened fæcal matter, which had been long resident in the large intestines, escapes, and then there is no other action; and occasionally, as in Case xii, the bowels have been freely opened, and yet there is a fatal result.

Vomiting has occurred in every case. In the commencement, it is merely the return of matters taken; but as the disease advances, it is said to put on a stercoraceous character. It is generally, however, if not always, the matter resident in the small intestines which passes from the mouth; as, in most of the cases, the obstruction has been in the small intestines, which would as effectually prevent the passage of the contents of the larger bowels *upwards*, as it does the removal of the contents of the upper part of the canal *downwards*. In one remarkable instance (Case xv), the matter vomited was of a very fluid nature, and amounted in a very short time to the extraordinary quantity of *ten pints*.

Abdominal Distension has occurred to a greater or less extent in almost all the cases. In some it sets in early and proceeds rapidly; in others, even when the disease has lasted some time, there is scarcely any distension. Thus, in Mr. Hilton's case, it is stated, so late as the eighth day, "abdomen flat and collapsed".

Hiccup. There is great uncertainty about this symptom; it does not occur in every case, nor, indeed, in the majority; for out of the total number to which reference has been made, it is only mentioned in three of the cases.

---

[1] Heberden, Commentarii de Morbis, p. 14.

The Countenance was natural in all of the cases at first, and remained so throughout in some; in one it was florid; in others, however, distress and anxiety were depicted; and in one of Mr. Mackenzie's cases, though the disease was seated in the *large* intestines, the face was reported to be hippocratic and expressive of intense suffering, and here the amount of inflammation was not great.

Pulse. This varies considerably in different cases, and at different periods of the malady. It is generally slow at first, quickens when inflammation sets in, and becomes excessively rapid as irritation advances; in some, it is described as about 68; in others, between 80 and 90; and in others, again, it was as high as 120. In character, also, the pulse varied considerably; in some cases, it was described as natural; in others, as full and wiry; and in others, as exceedingly feeble. These variations have seemed to bear some ratio to the extent of obstruction,—the length of time the disease has lasted,—the amount of inflammation present,—the original constitutional powers of the individual,—and the impression which the disease has made upon the system generally.

Tongue. There has been noticed great variety in the appearance of the tongue. In some cases, it remained clean, even to the last; in others, it was white; in others, brown; in others, red; in others again, it was very dry; and in one case, and one case only, was there noticed an aphthous state of the tongue and mouth.

Skin. In some cases the skin was cool; in others, hot; in some, dry; in others, covered with warm perspiration; in others, the surface was bedewed with a clammy sweat.

Urine. It is worthy of remark, that, in some of the cases, there was a copious secretion of urine, showing that a part of the function which should be carried on by the bowels, was, in a measure, compensated for by the kidneys, when the bowels were no longer capable of acting. In *none* of the cases was an analysis of the urine made, but nothing of an abnormal nature appears to have called for attention. In one case there was *dysuria;* but that arose from a mechanical cause,—a stricture at the bulb of the urethra; and, in one case, there was *retention of urine,* requiring the use of the catheter, but that appears to be referrible to spasm about the neck of the bladder, produced by a blister.

Sleep was procured in most cases, especially in the commencement of the malady; but, towards the close of the case, restlessness, more or less extreme, was manifested. *Delirium* was also observed in one or two cases, towards the close of life; but that was not a symptom observed in the majority of instances.

Dyspnœa is mentioned in one case. It did not arise from any affection of the thoracic viscera, but was owing to abdominal distension thrusting the diaphragm upwards, and thus contracting the area of the chest.

Rigors were also apparent in two or three cases; and, in these, were precursors of inflammatory action about the peritoneum.

The duration of the disease, it will be observed, varied very much. One case was fatal within a few hours, another in three days, another on the fifth day, another on the seventh, and another on the eighth; one on the tenth, one on the fourteenth, and one on the sixteenth day.

CAUSE OF DEATH.

In most instances, the death of the patient is to be referred to exhaustion, consequent on the suffering to which he has been exposed, and the total interruption to the function of the intestinal canal. In some instances, it would appear to be attributable, in great measure, if not entirely, to inflammatory action. In two instances, I think it can scarcely be denied, that death was hastened by the operation performed for the liberation of the stricture; and, in one case, death appeared to be almost instantaneously brought about by the discharge of very large quantities of fluid by vomiting.

PROGNOSIS.

In respect to the prognosis, a few words will suffice, as, so far as we know, all cases are fatal, and therefore the opinion given in regard to them must be very unfavorable. The principal chance of a successful issue seems to depend upon finding out the cause of obstruction, and removing it by operation before the powers of life are too much exhausted.

DIAGNOSIS.

In the earlier stages, it is not easy to say accurately the nature of the affection; but, towards the close of the malady, when it resists all remedies suggested for its removal, there can be little doubt about it.

The maladies most likely to be confounded with internal strangulation, are, colic, enteritis, stricture, malignant disease, and introsusception. In the beginning, it will be perceived, by reference to the cases, that some of them much resembled *colic*. There was pain of intermitting spasmodic character, in some part of the abdomen, not increased on pressure; constipation of the bowels, and absence of fever. As the disease advanced, however, the pain became more violent and more constant; vomiting supervened, at first of the contents of the stomach, but, ultimately, so-called stercoraceous vomiting. The entire failure of all remedial means plainly showed that colic was *not* the disease under which the patient labored. From *enteritis*, it may be distinguished by its comparatively slow progress, by the absence of intense pain and fever, and by the distension of the abdomen not appearing so early as in that disease. As *stricture* occurs most frequently in the lower part of the rectum, examination by the finger will generally enable us to distinguish between the two; and constipation and stercoraceous vomiting are not so often seen in the former as in the latter case. From *malignant* disease, it may be diagnosed by the countenance, by the rapidity of its course, and by the constipation being more persevering than in that disease. From *introsusception*, I know of no symptoms by which it can be *clearly* and *unerringly* distinguished; but as it has not been my lot to see much of this latter affection, and as what I have seen has been principally in children, I cannot, from experience, speak to this point.

Respecting the mode of distinguishing one kind of obstruction from another, great difficulty must, necessarily, be felt. If I may draw any inference from one case (and I am very unwilling to do so), I should say that the free relief of the bowels, the result being nevertheless fatal, would serve to distinguish obstruction, the effect of contraction of

the peritoneal coat of the bowel, from strangulation, resulting either from the twisting of the mesentery, or the formation of false bands. According to Mr. Mackenzie, the following will serve to diagnose dislocation of the sigmoid flexure of the colon: "In these cases, while all the symptoms of strangulation and obstruction of the bowels are present, there is one symptom never absent, which, respect being had to the history of the case, leads to a correct diagnosis, viz.—that it is impossible to throw up injection, per rectum, in any quantity; for, as soon as the gut is filled up as far as the twist, which is always low down, the fluid injected flows out as fast as it is thrown up, independent of any action of the intestine itself. Besides, the introduction of the long tube is impracticable, being always arrested at the obstruction."[1]

Dr. Barlow, in an interesting paper in Guy's Hospital Reports,[2] endeavours to diagnose the *situation* of stricture of the alimentary canal, by the *amount* of the secretion of urine, and cites cases in point. "It seems," he says, "that where there existed a perfect obstruction in the upper part of the small intestines, there was almost a total suppression of urine; where there was a diminution of the calibre of the canal, in the same situation, the urine was diminished in quantity; and where the small intestines were free, and the obstruction was seated in the colon, the urine was very abundant." Should future experience confirm these statements, a very valuable diagnostic mark will be obtained; but in Dr. G. Bird's case, and in some of those which I have related, the obstruction was seated in the ileum, and yet there was no perceptible diminution of urine, so that more facts are wanted to establish this point. At present it seems probable that where the *duodenum* is the intestine affected, non-secretion of urine will be noticed.

TREATMENT.

In the treatment of this dangerous malady, the following indications present themselves:—1, to open the bowels; 2, to subdue inflammatory action; 3, to support the strength; and, 4, to remove the obstruction.

1. *To open the Bowels.* As constipation is one of the most constant, and, at the same time, earliest symptoms, to relieve the bowels is certainly the first indication; and this may be attempted by,—*a*, purgatives; *b*, injections; *c*, the warm bath; *d*, nauseating remedies; and *e*, bleeding.

a. Purgatives. Great judgment is, I think, required in the selection of purgatives, as, if they do not effect their object, they do much mischief; for it is questionable whether the ulceration met with in the mucous membrane, in many cases, may not be in part owing to the unsuccessful use of drastic and violent purgatives. Had I grounds for suspecting that a case was one of intestinal obstruction, from any of the causes mentioned, I would endeavour to liquefy the motions, so that, if possible, they might pass the stricture in a fluid form. For this purpose, I would give one large dose of calomel, to be succeeded every two hours, if the stomach would permit it, by drachm doses of sulphate of magnesia, in peppermint water; and, did these not succeed,

[1] How far this *is* diagnostic I think admits of question.
[2] Vol. ii, New Series, p. 396.

I would rub croton oil on to the abdomen, or try one drop of croton oil internally. Should these fail, I would give up the use of purgatives, feeling assured that the obstruction was much too complete to be overcome by their means.

b. Injections. Purgatives failing to procure action from the bowels, recourse is naturally had to injections, which should, in the first instance, consist of the compound extract of colocynth, dissolved in water; but when a tympanitic state of the bowels occurs, turpentine, or the tincture of assafœtida, is to be preferred. So far, however, as my experience goes in these cases, injections avail but little; and I shall hereafter relate a case where seventy-two injections were administered without any apparent beneficial result.

c. The Warm Bath is a remedy which it would be very proper to use in the earlier stages; but, as the disease advanced, the strength of the patient being much exhausted, would scarcely justify its trial. Fomentations, often useful, and always soothing, should be used in all cases, especially where there is pain.

d. Nauseating remedies, in a strong and robust individual, might deserve a trial. Of these, perhaps, the two best are tartarized antimony, and the tobacco injection; but I should not be very sanguine of obtaining success by their means.

e. Bleeding may be now and then resorted to, in the earlier stages, in the robust and plethoric; but bleeding, carried to any great extent, I consider objectionable, for reasons to be stated hereafter.

2. *To remove inflammation* is a point to which particular attention should be directed; and, perhaps, there is but one thing of more consequence than this, for if it be allowed to go on unchecked, it may destroy the patient; and yet, if too vigorously attacked (by reference to the cases it will be seen that, in some, it was entirely absent, and, in almost all, limited, and by no means severe), the patient may sink from other causes. I think, therefore, that general bleeding will seldom be called for on this account; the application of leeches, fomentations, and the administration of small doses of calomel and opium, will be all that is required for removing or controlling peritonitis brought about by this cause.

3. *To support the strength.* I am very anxious to lay great stress upon this point, because I do not think it has been sufficiently attended to in practice; and I feel sure that patients have been largely bled, who would have had a better chance, had the vital fluid been less unceremoniously abstracted. If the bleeding be not sufficient to effect its object, either in opening the bowels by its depressing effect, or by removing the peritonitis by its antiphlogistic power, it must, if carried to a great extent, do infinite harm, as it will tend to depress the vital powers, already at a low ebb, and thus take away, I may say, every chance, either from the efforts of nature, or the resources of art. In the absence of fever, and where the stomach would allow of it, I would give, from time to time, barley water and chicken broth in small quantities. Where there is great restlessness and want of sleep, and where I had failed in the use of purgatives, and determined no longer to administer them, I would certainly advise the administration of opium, as, by so doing, I should hope to tranquillise the nervous system; for nothing tends to exhaust the frame so much as long-continued nervous irri-

tability; and cases are on record showing the good that has been done with it occasionally. If I employed opiates, I should prefer solid opium to every other form,—first, as being more likely to be retained by the stomach; and secondly, as possessing a stimulating as well as sedative property, which, I think, would, in these cases, be decidedly advantageous.

4. *To remove the obstruction* is one of the most important and difficult questions connected with this subject, and one upon which much difference of opinion exists. It is clear that this can only be done with certainty by means of an operation; and two cases have lately occurred, in which encouragement has been given to this plan. In one of the cases (Mr. Hilton's), the bowel was so far liberated, that the intestinal contents passed through the obstructed part. In neither of the cases, however, did the patient long survive. In considering this subject, four points are to be entertained: A, the likelihood of finding and removing the obstruction; B, the place of performing the operation; C, the time at which it should be undertaken; D, the chance of success that may attend the attempt.

A. *The likelihood of finding and removing the obstruction.* Upon this point, there can be no doubt that there is great uncertainty; for although, in both the cases to which I have alluded, the obstruction *was* detected and removed, yet in one (Mr. Hilton's case) very considerable difficulty was experienced; and in case XVI, had an operation been undertaken, the incision would, in all probability, have been made to the *right* of the umbilicus, as a decided induration was evident there, and not elsewhere, and a pouch immediately above it. It was natural, therefore, to suppose that this was the point of obstruction; whereas, on dissection, this proved to be merely hardened scybala; and the fatal incarceration was situated in the upper and posterior part of the *left* side of the pelvis.

B. *The place of performing the operation.* Mr. Phillips says: "There are some cases where the seat of obstruction is so clearly indicated, that *no doubt* remains. In such cases, I apprehend the rule is evident,—the incision should be made as near as is prudent to that point. But supposing the point of obstruction to be only obscurely marked, or indeed not discoverable at all, then I consider the incision should be made on the median line, because an opening in that situation may be found most convenient for liberation, if that be practicable; or, for the establishment of an artificial anus, supposing liberation of the intestine be not accomplished." The case, however, to which I have just alluded, induces me to think the central incision, as recommended by Dr. Crisp, preferable in all cases where the obstruction is seated in the small intestines.

C. *The time at which an operation should be undertaken.* It is very difficult to lay down any decided rule for this. Mr. Phillips says, that interference by surgical operation is justifiable when three or four days have passed without any relief from the bowels by ordinary means, providing constipation be complete, and fæcal vomiting continue. I scarcely think we are justified in operating so soon; partly because persons have recovered from constipation of twenty-three days' continuance, and partly for reasons which will appear in the sequel.

D. *The chance of success* I regard as a very important consideration

before undertaking any operation; and I cannot think that cases of internal intestinal obstruction, even under favourable circumstances, offer much chance of a successful issue from operation.

In the cases to which I have referred, it has been said, that, had an operation been performed earlier, a different result might have been obtained; and no doubt, in both cases, delay was caused by the unwillingness of parties interested to give their consent. Can that be a matter of wonder, when it is recollected, that if an operation be undertaken, both the patient and surgeon must be prepared to go *all* lengths? The obstruction may *not* be at the part suspected; it may be *some way* from where the operation was commenced, and a *very large abdominal section* may be required to complete the operation; and it may possibly not be completed at all. How can this be undertaken without very considerable risk? How can such an operation be *proposed early?* And how can any better justification be urged for such a proceeding, than that long since advanced by Celsus: "Satius est anceps remedium experiri quàm nullum?"

If it be true, that great difficulty attends the finding these obstructions, and great danger follows the attempt at removing them by the knife, so that we cannot conscientiously recommend it but as a forlorn hope, it is but reasonable to inquire, whether any other expedient can be resorted to for a similar purpose. And this naturally induces me to ask whether nature ever produces a cure, or whether spontaneous relief is ever obtained? Several cases are on record, where persons with the symptoms I have described, and, to all appearance, sinking from internal obstruction, were suddenly relieved in the bowels, and gradually recovered. A case is alluded to by Mr. Cooper where this happened. An elderly lady, residing at Norwich, was under the care of Mr. Colman, suffering from constipation of the bowels, having had no evacuation for four days. The usual purgative remedies were prescribed, but without effect; enemata and more drastic cathartics were tried, but still ineffectually; vomiting and immense distension of the abdomen supervened; the symptoms became more and more urgent, and, on the twelfth day from her attack, she had had no relief from her bowels. Dr. Alderson was then called in, and asked *what purgative* he would recommend; to which he replied—"None; but a large dose of opium". It was given, and *in a few hours* the bowels were freely opened, and the patient recovered.[1] What was the precise condition of this lady must ever be open to doubt; but I venture to suggest that this might have been a case where the bowel was strictured by false membrane, that inflammation and ulceration of this band ensued, and that then the gut was liberated; and I am the more inclined to think so from what is observable in Fig. 5, in which the band seems to be undergoing the ulcerative process; and I feel convinced that, had the patient lived a little longer, it would have entirely given way, and the patient might possibly have recovered. It is this conviction which makes me lay so great stress upon keeping up the strength of the patient; for as newly-formed parts are less organized than those formed originally, there is a hope, if the strength of the constitution be kept up, that the band may give way before the bowel, and the patient's life be saved. It is from this case that I particularly recommend the

[1] Medical Gazette, vol. xlii, p. 608.

renewal of the old plan of metallic mercury; I think its use has not been rightly understood. That it will remove an introsusception, or enable a portion of bowel to be drawn out of these bands, I agree with Mr. Hilton, is not at all likely to happen; but that it might in favourable cases (Mr. Hilton's was not one of that sort), by exciting a pressure upon the bowels, break through a false band, I verily believe; and I am more strengthened in this idea by the good that has occasionally followed its use. I have heard of a case, which I believe was of this kind, where metallic mercury appeared to remove a very obstinate constipation, and the patient recovered; and my friend Mr. Lawrence of Brighton has mentioned to me, and kindly allowed me to make public, the two following instances, which are cases in point. In one, a boy, æt. 10, was seized, without any apparent cause, with constipation of the bowels, but with no sign of inflammation. He was bled, leeched, took drastic purgatives, and had seventy-two glysters administered. On the twenty-first day of the disease, no motion having been procured, ʒiij of metallic mercury were swallowed; no effect following, the same quantity was repeated on the twenty-third day, after which he felt great weight and pain in the abdomen, and voided, with much forcing, an immense quantity of fæcal matter, and all the mercury, minus ʒss; almost fatal syncope followed, but the boy eventually recovered. The other was a case of similar kind, of shorter duration; it occurred in an elderly lady. All purgatives proving unavailing, two doses of metallic mercury, of ʒiv each, were given; several motions (and all the mercury, minus ʒj) followed its exhibition after six hours, but the exhaustion and the depression occasioned were such as to destroy the patient. For these reasons, I think metallic mercury again worthy of a trial; it *can* do no great harm, and *may* do good. That it will often fail, I have not the least doubt, especially where the obstruction is low down, and has been so great as to ulcerate or destroy the coats of the bowel; but where, on the contrary, the band is thin, and high up in the canal, where the constriction is not so great as seriously to engorge or injure the part constricted, where the system does not sympathise much with the local malady, and where the powers of life remain vigorous, I am not without hope that it may *occasionally* succeed; and if *but one case* should occur in which, from what I have said, a trial of this remedy should again be made with success, I shall consider my observations not altogether out of place, and I hope I may with truth be permitted to say—"Est quiddam prodire tenus si non detur ultra".

Case xii. Former Enteritis--Obstruction of the Ileum from Contraction of the Peritoneal Coat—Softening and Ulceration of the Bowel—General Peritonitis—Circumscribed Abscess in the Right Iliac Fossa. J. T., ætat. 40, came under medical care on January 28th, 1832. He had been subject to flatulence and constipation, and had been seized three months previously with obstinate constipation, and with marked symptoms of enteritis; but recovered by bleeding, croton oil, and purgative enemata. When I saw him, he complained of violent pain in the situation of the transverse colon, relieved by pressure; it had existed only a few hours; there was slight tension of the abdomen. He had had three motions on the preceding day, and one that morning; he had no fever. He was ordered to be bled to ʒxvi; to have a drop of croton oil immediately, and 4 grs. of scammony every four hours until the bowels were opened.

Jan. 29th. Blood not sizy: no pain: no fever: no motion. To have a drop of croton oil immediately, and to have it repeated if required.

Jan. 30th. No motion. Two drops of croton oil, and an ounce of castor oil were taken, and injections frequently given. A bougie was passed into the rectum, and met with complete resistance at four inches. The croton oil and enemata were repeated.

Jan. 31st. After great efforts, a very hard portion of fæcal matter passed, as large as an egg, yesterday afternoon, which afforded great relief; three or four loose motions followed. Pain recurred this morning in the transverse colon, and there was great rigidity of the abdominal muscles. Half a drachm of castor oil was given; an opiate liniment was used; and the enemata were repeated.

Feb. 2nd. Leeches had been applied to the abdomen, and several enemata and purgatives administered. No motion until last night. Some urine passed. He is easier, but the abdomen is still tense. A dose of salts and senna was given, and fomentations were applied to the abdomen.

Feb. 3rd. Many foul fæcal stools, with some lumps, and griping; belly less tumid, and softer; pulse natural; tongue clean. He was directed to take a grain of Barbadoes aloes every night.

Feb. 4th. Vomited yesterday afternoon; several motions; abdomen, notwithstanding, hard and full, especially on the right side.

Feb. 5th. Diarrhœa; vomited at times yellow matter, of fæcal smell; belly soft and easy; pulse good; tongue clean, but red. The enemata were repeated; and he was ordered to take twice daily a pill, of a grain of calomel, half a grain of opium, and four grains of compound extract of colocynth.

Feb. 6th. No motion; no vomiting; exceedingly restless; hiccough; pulse very feeble; an aphthous state of the throat. To have a cathartic draught occasionally; the injections to be repeated.

Feb. 8th. Four motions, some figured; abdomen full; aphthæ increased; pulse lower; light-headed; sinking.

Feb. 12th. He died.

Dissection, forty-eight hours after death. The skin covering the abdominal parietes was undergoing putrefaction; the abdomen tense; no air nor fluid in the general cavity. The jejunum and upper part of the ileum were enormously distended (measuring nine inches in circumference), chiefly by wind, but partly by yellow liquid fæcal matter. There was a stricture, formed apparently by contraction of peritoneal coat, without any thickening, in the ileum, near its middle; the calibre of the gut in this situation would not admit a large pea; the lower half of this intestine was exceedingly contracted. The convolutions of the intestines were united together by bands of lymph; they were also adherent to the abdominal parietes, and in many places approaching to sphacelus; for, on gently separating the unnatural adhesions, an opening was made into the gut. There was an unnatural contraction of the muscular fibres in the centre of the transverse colon; but, by pressure, this part could be made as capacious as others. There was a large collection of pus in the right iliac fossa, which was contained in a distinct cyst of false membrane, formed by the agglutination of the lower part of the ileum, the cæcum, and the peritoneum covering the right transversalis and iliacus internus muscles.

Case xiii. Former Peritonitis—Enteritis?—Strangulation of the Ileum by Membranous Bands—No Ulceration—Death on the Sixth Day. I was invited by a medical friend to witness the *post-mortem* examination of a gentleman, æt. 40, who had been attended by Dr. Davis, Mr. Key, and himself. This gentleman, in the year 1830, had been seized with constipation of the bowels, to which succeeded peritonitis. He was largely bled, treated in the usual way, and recovered. For three years he enjoyed very good health, except being occasionally subject to constipation, which easily yielded to aperients. On the 4th September, 1833, he had as usual a natural motion in the morning; but, after eating a mutton chop for dinner, he felt an uneasiness and fulness of the abdomen, for which he took a blue pill, and a mild aperient draught. The uneasiness continuing, leeches were applied to the abdomen, and croton oil and other purgatives administered, together with enemata.

Sept. 5th. No motion having been procured, the uneasiness continuing, and sickness supervening, with tension of the abdomen, the purgatives were continued, and the enemata repeated; the latter returned, only slightly tinged with fæcal matter.

Sept. 6th. After taking a mild aperient draught, he had one scanty motion; felt much less distension; and the vomiting abated. Towards the afternoon, however, the uneasiness increased, the sickness returned, and he had no further motion. The purgatives and enemata were continued; a blister was applied to the abdomen; and an opiate was ordered to be taken at bed-time.

Sept. 7th. There were more distension and uneasiness of the abdomen; the vomiting was stercoraceous; the bowels were still confined.

Sept. 8th. He was much the same, with the exception of retention of urine (probably owing to the blister), requiring the catheter.

Sept. 10th. Hiccough supervened; the stercoraceous vomiting continued; and he died at ten o'clock at night.

Dissection. Decomposition was commencing. About eight ounces of brown serum was found in the abdomen: there was no other evidence of recent peritonitis. The liver, gall-bladder, spleen, and stomach were healthy. A little flatus, and much yellow fæces, occupied the small intestines, the muscular coat of which was in a state of hypertrophy. The hypertrophied appearance increased towards the lower part of the ileum, where, not far from its termination, a considerable knuckle was surrounded by two false membranes, one of them of extreme tenuity, not much thicker than a thread, and in parts of a black colour; this completely surrounded the gut, and very considerably diminished its area. The surrounded portion was of a pale colour, and flaccid; and the mucous membrane, in various parts of the intestine, was soft, pulpy, and of a chocolate colour, but nowhere ulcerated. The large intestines were healthy. The bladder was empty.

Case xiv. Former Peritonitis—Obstruction from some folds of the Ileum being adherent to the Abdominal Parietes—Mucous Membrane softened and ulcerated—Death on the Ninth Day. A man, æt. 34, in lifting a weight, overstrained himself; shortly after which, he felt a pain in the bowels, and, although this continued, he did not for six days apply for medical advice. On the 6th day, he complained of some pain in the abdomen, which was

tense, but not very tender on pressure; his bowels had not been opened since the strain; he had constant vomiting, occasional hiccough, and some dyspnœa; his countenance was florid; his tongue covered with a brown fur; his pulse was regular, full, and wiry; and there was dysuria from stricture about the bulb of the urethra. Twenty ounces of blood were taken from the arm; twenty leeches, and fomentations, were applied to the abdomen; and ten grains of calomel and an effervescing draught were given.

Five hours afterwards, I found him much the same. He had vomited frequently, but the calomel had staid down; there was rather more pain upon pressing the abdomen; he had slept a little, but he had had no motion; the tongue was moister, but the countenance was much shrunk; the pulse was 97, small and thready; there was very great general debility, and the skin was covered with a cold clammy perspiration. Five grains of calomel and one of opium were ordered, together with castor oil and enemata.

7th day. Some sleep during the night; less pain, but more tenderness of the abdomen; vomiting and hiccough continue; no motion; in a state of complete collapse. Extract of colocynth, croton oil, port wine, and quinine were given him; the fomentations continued; and a turpentine enema administered.

8th day. The matter vomited assumed the fæcal character; there was no motion, although some of the enemata, which had been frequently given, were slightly tinged with fæcal matter. The collapse became more perfect; and he died in the afternoon.

Dissection, sixteen hours after death. The muscles were very rigid: the abdomen was tense: the thoracic viscera were healthy. A great portion of the small intestines were immensely distended with flatus; the vessels of their peritoneal coat, as well as of that lining the abdominal parietes, were much congested: some of the folds of the ileum were agglutinated together, and tightly bound down to the peritoneum covering the right iliac fossa, by strong and apparently long-standing membranous bands. The mucous membrane of the constricted part was in a state of ulceration; and the coats were so completely softened, that they all gave way, upon the convolutions being laid hold of. The folds of small intestine below the constriction, were only one-fourth the calibre of those above. The muscular coat of the bladder was very much thickened, owing to a stricture which existed at the bulbous portion of the urethra.

Case xv. Internal Hernia—Strangulation by Omentum—Vomiting of Ten Pints of Fluid—Death within Three Days of the Seizure. A medical man was called one morning to a gentleman, æt. 58, who was said not to be quite well. He had slept indifferently, and complained of a little sickness, or rather a slight feeling of it; his bowels were somewhat uneasy, and had not been relieved since the previous afternoon. Although the message was not urgent, the surgeon went immediately, and found his patient in bed. He expressed surprise at seeing him so early, and regretted that he had given himself so much trouble for so little cause. His pulse was 68; skin cool; tongue clean; abdomen rather too full, but quite soft; there was no pain upon pressure, but a feeling of soreness. Blue pill and compound rhubarb pill were prescribed for him. At five in the

afternoon he was much the same, having taken at noon a draught with rhubarb and decoction of aloes. The draught was ordered to be repeated every four hours, and the patient was left, without any reason to be anxious about the issue. The following morning, early, the symptoms were not aggravated, except that the abdomen was somewhat larger; there had been no motion, although three doses of rhubarb and decoction of aloes had been taken. A pint and a half of warm water, with some oil, were injected into the bowel; five grains of calomel were put upon the tongue; and, after an interval of two hours, a teaspoonful of castor oil was administered. At 12 at noon, his pulse was not quickened; but his abdomen had become somewhat larger. At 3 p.m. an active enema was administered, without benefit; and a pill composed of calomel and soap was ordered to be given every two hours. At 5 p.m. the pulse had become quicker, and the abdomen larger. At 8 p.m. he was seen by a physician, whose opinion was unfavourable, notwithstanding that there was no evidence of inflammation, and no effusion, and that no hernia was discoverable. He advised that croton oil should be added to the pills, and a turpentine enema administered. At half-past 12 P.M. the patient was quite calm; his intellect quite clear. He was thankful for everything done for him; and stated his belief that there was some alteration of structure, which could not be overcome. About 3 the following morning (the third day), he began to vomit; and, raising himself on his elbow, fluid to the amount of *ten pints* passed from his mouth, as from the spout of a pump, without the least effort; during this, he fell over on his side, and expired.

DISSECTION, TWELVE HOURS AFTER DEATH. Upon turning up the omentum, the cause of death was immediately evident. A portion of omentum had grown round a knuckle of the small intestine (ileum), and occasioned strangulation; so that when the omentum was turned back, the intestines were dragged back with it. It appeared as if this fatty growth had been in progress for some time: it was pervading the intestines generally. They were also very much narrowed in two or three places. There was no fluid in the abdomen, neither were there any evidences of inflammatory action.

CASE XVI. ILEUM STRANGULATED BY FALSE BANDS AND MESENTERY—THE LATTER NEARLY ULCERATED THROUGH—DEATH ON THE NINTH DAY. John Anthony, æt. 21, was admitted a patient of the London Dispensary, under the physician, on May 11, 1833. He was by trade a sawyer. He was of costive habit, and had overstrained himself some years ago. He was at work as usual on the 8th inst., when he suddenly felt a sensation as if his bowels were drawn up in knots: he soon became sick, and had since had no motion. He had been twice bled, with relief, and leeched upon the abdomen; and he had taken calomel, jalap, and scammony.

On the 16th he was transferred to me. The blood taken from the arm was neither cupped nor buffed; he was much exhausted and emaciated; features very much shrunk; abdomen very much distended, and tympanitic. There was something resembling a pouch to the right of the umbilicus, and below this an induration, which was very tender when touched. Pressure upon any part of the abdomen gave pain, but more especially in the before-mentioned part, and in the course of the

descending colon. With the exception of two days, vomiting had been constant from the commencement of his illness: this morning a large quantity of very offensive stercoraceous matter was brought up. He lay with his legs drawn towards the abdomen, being easiest in that position; no rigors; no sleep; tongue brownish, and like raw meat in the centre; pulse soft, 108; skin perspiring; rectum, upon examination, healthy and empty. He was ordered to have a common enema immediately, and two grains of calomel and a quarter of a grain of opium, and a drachm of Epsom salts in peppermint water every two hours; and to have a turpentine injection in the evening.

May 17th. The injections soon returned, only slightly tinged with fæcal matter; the vomiting continued urgent; the matter rejected was yellow, and seemed to come from the small intestines; the abdomen became more distended. He became delirious, and died at eleven in the morning.

Dissection. There were about two ounces of serous fluid, but no air, in the general cavity of the abdomen. The small intestines were excessively distended, partly by yellow inodorous fluid, and partly by flatus. The coats of the small intestines were hypertrophied; the lower part of the ileum, towards its termination in the colon, was in a complete state of strangulation, both from bands and mesentery. The portion incarcerated consisted of two convolutions, united together by bands of lymph, in a state of great engorgement; the mucous membrane appeared softened, and on the eve of bursting; and the portion of mesentery by which the principal stricture was formed, although very tightly embracing the bowel, was also softened, and had in part given way. The portion strangulated was lying in the upper and posterior part of the left side of the pelvis; the cæcum had been somewhat dragged from its situation. The liver was healthy; the gall-bladder distended with green bile; the right kidney was healthy, but its ureter was dilated to the size of a goose-quill. The thorax and head were not examined.

CONCLUSIONS.

I. The ileum is that part of the intestinal canal where internal obstruction is most likely to occur.

II. Membranous bands (probably the result of former peritonitis) are the most frequent cause of obstruction.

III. Partial is more likely than general peritonitis to lead to obstruction.

IV. All the convolutions of the intestines may be united together without obstruction.

V. Mechanical, although the direct, is not the sole cause of obstruction, as there is reason to suppose the mechanical cause has been in existence some time before the symptoms show themselves; other causes must therefore arise to produce them, and the most frequent of these are sudden and violent exercise, and errors in the quantity or quality of food.

VI. It is *possible* for a spontaneous cure to arise from inflammation and ulceration of an obstructing band.

VII. The same consequences are seen in internal intestinal obstruction as are seen in other obstructed canals—viz. hypertrophy and dilatation above the stricture; atrophy and contraction below it.

VIII. The symptoms vary considerably in different cases.

IX. The order in which the symptoms arise is as important as the symptoms themselves.

X. There are no symptoms by which one obstructing cause can be clearly distinguished from another.

XI. The duration of the disease varies much in different cases.

XII. The strength of the patient should be maintained.

XIII. Bleeding should be employed with great caution.

XIV. The seat of obstruction may be very apparent, and yet deceptive.

XV. An operation is only justifiable as a forlorn hope.

XVI. As a rule, when an operation is resorted to, the central incision is to be preferred.

XVII. There is reason to believe that metallic mercury has proved useful; and it is in obstruction from membranous bands chiefly, if not solely, that benefit is to be expected from its use.

Camden Row, Camberwell, April 1851.

OBSERVATIONS ON THE FORM AND MOVEMENT OF THE CHEST IN PHTHISIS.

By RICHARD PAYNE COTTON, M.D., Assistant-Physician to the Hospital for Consumption and Diseases of the Chest.

AN absence of symmetry both in the form and movement of the thorax is very apt to be considered as a necessary condition to the diagnosis of Consumption; and I have seen many cases of phthisis overlooked, in consequence of a well-formed and, to all appearance, healthy chest, having been deemed incompatible, not only with the existence of pulmonary tubercles, but even with the tuberculous diathesis. It is the object of the following observations to correct this misapprehension; and I shall commence with a few remarks upon the relation of the form of the chest to the *development* of consumption.

The form of the thorax appears to have little or nothing to do, primarily, with this disease, for it is equally common to see phthisis attacking persons of fine and well-proportioned chests, as those who are the subjects of some congenital or acquired thoracic malformation. The life-guardsman, the pugilist, the blacksmith, etc., notwithstanding the fully-developed chests which their several occupations induce, are, *cæteris paribus*, quite as liable to the inroads of phthisis, as the mechanic or artizan, whose daily task leads to the opposite result; the truth being that, in every instance, the origin of the disease is not attributable to any peculiar conformation of chest, but to the various circumstances under which such conformation has arisen; the impure atmosphere which has been breathed; the excesses which have been indulged in; the violation of sanitary laws; or, the inherited scrofulous taint. It is very questionable whether even the evil practice of wearing stays has been justly accused of bringing on phthisis in the female sex. M. Louis considers the popular belief upon this subject

as nothing more than matter of assertion, wholly unsupported by proof; and the very circumstance of consumption being so much more prevalent in London amongst males than females,[1] might be fairly used as an argument against it. Without doubt, this habit, which fashion has so mistakenly inflicted upon women, has its penalties; but phthisis can scarcely be included in the list.

The varieties of deformed chests, which are sometimes congenital, but oftener, perhaps, acquired during infancy in consequence of imperfect nutrition, are much less frequently seen amongst consumptive patients than might be anticipated. In phthisical children they are very common, but not so in adults; which probably arises from the circumstance, that whenever the deformity proceeds from the early development of scrofula, the little patients' career is very liable to be cut short by some form of tuberculous disease; but when it arises from causes which are only temporary, the health may be restored as these are overcome; and although the form of the chest may ever afterwards retain the evidence of early derangement, it does not expose its possessor, on that account, to any unusual chance of becoming phthisical. Whether or not this may be a satisfactory explanation, the fact remains, that the pigeon-breasted chest is not of very frequent occurrence amongst phthisical adults, whilst it is common enough to observe persons so affected in the enjoyment of perfect health.

The deformity arising from angular curvature of the spine is extremely rare, and has only once fallen under my observation amongst more than two thousand consumptive patients; and this is the more singular, from the affection being, in nearly every case, of scrofulous origin. Lateral curvature, on the contrary, is very common, and the loss of symmetrical form and motion of the thoracic walls which it generally involves, is liable to be mistaken for an indication of pulmonary disease, if the condition of the spine should escape notice; but this deformity has no relation to the development of phthisis, beyond that of exhibiting a defective state in the general health, which may have induced the tuberculous diathesis.

Continued observations upon phthisis in all its multiform characters, have led me to the following conclusion:—that the best formed chests afford no security against the onset of the disease, whilst those which are comparatively ill-developed, or even deformed, do not appear, on that account, more liable to become the seat of tubercle.

I now pass on to some remarks upon the form of the thorax as influenced by phthisis in its commencement and progress; and these will be better understood by a brief reference to the relationship existing between phthisis and tubercle.

There is a period of the disease, sometimes well-marked, but equally often so short and ill-defined that it escapes detection, which may be termed the *preliminary* stage; it might be called with more propriety the *first* stage, but this title has been too long applied to a somewhat later period to admit of being changed. Consumption has now commenced. The tuberculous elements exist in the blood, but are not yet separated from it in the form of tubercle. This period passes into the tubercular or *first* stage; in some cases the tubercle is formed very

[1] First Medical Report of Brompton Hospital for Consumption, p. 8. London: 1849.

rapidly; but in others, it may take months, or even years, for its accumulation to any notable amount.

The tubercular deposit consequently should be considered as the *effect* of phthisis, and as bearing precisely the same relation to this disease as the lithate of soda does to gout; and, just as a patient may be gouty without having the movements of his joints affected by "chalk-stones", so may any one be phthisical without having the functions of the lungs interfered with by tubercle. The really phthisical symptoms, at the commencement of the disease, depend, not upon the state of the lungs, but upon the morbid condition which has produced it. It is true, that in the latter stages, much of the patient's suffering is a direct consequence of the pulmonary disease; but, at an earlier period, the general features of the malady—the weak and quickened pulse—the languid expression—the perspirations, etc.—depend entirely upon the *phthisis*, not upon the tubercle.

From this view of the subject it must follow, that phthisical symptoms may present themselves in connexion with every possible degree of pulmonary disease,—from a few scattered tubercles, which are scarcely appreciable, to their accumulation in considerable masses; and that *incipient* phthisis is not *always* discoverable by a physical examination of the chest. If this had been more fully admitted by writers upon these subjects, the stethoscope would have been often spared unmerited discredit.

We will assume, however, that the disease has fairly reached its *first* stage, and that the tubercular deposit is sufficiently abundant to interfere with the proper functions of the lung. In what manner is this exhibited by physical signs? Are the form and movements of the chest necessarily altered? These are questions which cannot be answered by an appeal to individual cases, on account of the well-known Protean character assumed by the disease, and are only to be met by continued observation upon such a scale as an hospital, like that at Brompton, can alone afford.

As a general rule, the form of the chest is unchanged, and the action of its two sides is symmetrical. In a few instances, there is a slight bulging over the diseased part, but, owing either to its rarity, or the shortness of its duration, it is not very often to be detected. Auscultation and percussion are now the sole guides to the condition of the lungs—points, however, upon which it is not my present object to enter.

I have always been aware that such a statement may be met by the very plausible argument, that directly the apex of a lung becomes tubercular, it must necessarily lose some of its capability of being expanded, and, as a natural consequence, the portion of the thoracic walls corresponding with the seat of the disease, must undergo a change in form, and be less moveable than the opposite side. But I think it can be shown how it happens that, in most cases, neither of these alterations are immediately apparent, and that the chest may retain, for a time at least, its healthy form, as well as its long-accustomed habit of equal and simultaneous motion.

There are two ways by which it does so, viz.: 1. The movement of the healthy side becomes diminished to the same extent as the other, so that the ordinary breathing, instead of being partly costal, as we find it in health, is almost wholly abdominal. 2. The pulmonary cells

in the immediate neighbourhood of the tubercular deposit become enlarged, and by increased capacity for air, compensate for those which are disabled.

The first is less common than the other, but its occurrence may be witnessed in certain cases (of which I have seen many examples), where, although it is evident from other signs that one lung only is affected with tubercle, the thoracic movement upon both sides is small but equal, except on very deep inspiration, when the diseased side is less raised than the other. The second may be seen in the many cases of early phthisis, in which the respiratory sound upon the diseased side is actually louder than on the other, and in the still more numerous instances, in which the murmur at the tuberculous apex is scarcely audible in some points, and morbidly loud in others; both of which conditions must be familiar to every experienced auscultator. It is probable that the first takes place in cases where *miliary* tubercle is scattered throughout the greater part of the lung's apex; and the second, where the tubercular deposit is in somewhat larger masses, and accumulated in particular spots.

The occasional bulging over the diseased part, first observed by Dr. Chambers, is yet additional testimony in favour of the second explanation; for when the portion of the chest so altered is percussed, it is often found to be more resonant than the healthy side, apparently in consequence of an extreme degree of enlargement of the pulmonary cells, amounting to emphysema.

But, after a time, which varies very much in different cases, circumstances are entirely changed; the diseased portion of lung *begins to contract*, and the thorax undergoes an alteration in form, not only in the region of the clavicles, but in its whole contour. M. Fournet referred this contraction to secondary pleurisy; Dr. Stokes has attributed it to atrophy of the lung; and Dr. Walshe has added to these, the contraction of plastic matter exuded into the pulmonary tissues. It is probable that these different causes are sometimes associated; but one or more of them must be present, before the form and action of the chest can be materially interfered with.

In the majority of phthisical cases, their effects begin to appear towards the middle or latter end of the first stage; but examples are sufficiently numerous of their being completely absent until softening has commenced.

I shall describe the several changes which are thus produced, as they are seen when in their extreme; premising, that the greatest variety will be met with, both in the rapidity and extent of their development.

The vertebræ of the neck and back are inclined forwards, and the shoulders are rounded; the front of the chest is consequently contracted, and the stature of the body lessened, giving an awkwardness to the whole appearance, difficult to describe, but which any one accustomed to the external aspect of the disease, would at once refer to the *tubercular chest*. If the patient be looked down upon whilst he is sitting, two curves are distinctly visible; the one affecting the whole line of the cervical and dorsal vertebræ, the other crossing it, and formed by the two shoulders inclining forwards. A depression is visible beneath one or both clavicles, giving to these bones the appearance of

prominence; and, posteriorly, the supra-scapular region over the diseased part is more or less sunken inwards. During ordinary breathing, either there is no costal movement whatever at the upper part of the chest, or there is a difference in its extent upon the two sides; and, on forced respiration, instead of the peculiar *swelling* movement of the infra-clavicular regions which is so characteristic of health, either one side is elevated more than the other, or the entire chest is raised, as it were, in one mass, without being perceptibly increased in the antero-posterior diameter of its upper part. These latter changes are more conspicuous in females than in males, as the healthy respiration in our own sex is principally abdominal, whilst in females—owing to the restriction of stays, or for reasons which the obstetrician is the best able to appreciate, there is greater freedom of movement in the upper ribs, and the breathing is, to a much greater extent, costal.

The loss of symmetry and healthy movement take place simultaneously; so that, unless there is some depression in the clavicular or supra-scapular regions, there will be no diminution in the ordinary movements of these parts. M. Fournet was, I believe, the first who drew attention to this circumstance; and I have certainly never seen an exception to it.

The changes above described may occur at any period of phthisis, from that antecedent to softening, to that of large vomicæ; but they are very capricious guides to the actual stage of the disease; for persons with cavities in the lungs very often are less altered, in these respects, than others who have scarcely entered the second stage. The different amount of pulmonary contraction which must accompany different cases, will at once account for these varieties.

From the preceding observations, I think it must be evident that inspection and mensuration of the chest can seldom afford assistance in the diagnosis of *incipient* phthisis; although, as the disease advances, they may prove useful auxiliaries to other physical signs. But when it is remembered that a departure from strict symmetry is occasionally seen in healthy persons, as a consequence either of a congenital peculiarity, or of certain pursuits which influence the development of the thorax, it is obvious that much caution is always necessary in their employment.

I shall conclude with the following extract from M. Fournet's *Clinical Researches on Phthisis:*

"Il arrive assez souvent qu'une infiltration tuberculeuse *considérable* a lieu dans un poumon sans qu'aucune diminution dans le volume du thorax, aucune modification dans les mouvements de la paroi thoracique correspondante, se fasse remarquer. C'est le cas ordinaire de la tuberculisation *miliare disséminée,* et de la phthisie aigue. Dans ce cas, les mouvements de la paroi thoracique ne sont pas sensiblement modifiés. . . . . On voit, que la palpation des mouvements de locomotion n'est applicable qu'à une époque déjà fort avancée, de la première période de la phthisie, époque à laquelle le diagnostic ne peut plus être douteux, si l'on s'est servi convenablement de l'auscultation et de la percussion."

4, Bolton Street, Piccadilly, May 30th, 1851.

ON THE CAUSES, CONSEQUENCES, AND TREATMENT OF INFLAMMATION OF THE VEINS.

By HENRY LEE, Esq., F.R.C.S.Eng., Assistant-Surgeon to King's College Hospital, and Surgeon to the Lock Hospital.

(Concluded from p. 503 of last Number.)

The term Phlebitis, originally restricted to designate inflammation of one of the larger veins of the body, has gradually been extended so as to include all the consequences which are liable to result from it; and the idea promulgated by M. Cruveilhier, that all such secondary affections have their origin in inflammation of the capillary veins of parts at a distance from the original lesion, has been the means of gradually associating the term rather with the grave constitutional affections arising from a poisoned state of the blood, than with any local disease.

In my last paper, I considered some of the effects likely to arise in different capillary systems from the stimulating nature of their contents, and from the mechanical impediment to the circulation produced by the admixture of foreign substances. At present, I shall in like manner review some of the results produced by the presence in the blood of substances which have a tendency to alter its condition, either by producing its coagulation, or by causing its separation into its different parts.

III. Since the time of Ambroise Paré, different surgeons have, with greater or less accuracy, described the abscesses which form in the lungs and liver after injuries to other parts. These abscesses were observed to be peculiar, in the sudden and unexpected manner in which they make their appearance, and also in the circumstance of several of them forming at the same time, leaving the intervening structure of the organ in its natural condition. The want of knowledge of the real way in which they originate, was veiled by ascribing their formation to "sympathetic action", "metastasis", "constitutional irritation", etc, But as such words have been used without any distinct meaning, their place might, perhaps, be advantageously supplied by the term "translation", employed to indicate that the *materies morbi* is transferred from one part of the body to another, in the manner and under the circumstances which have been already pointed out.

John Hunter was the first, in modern times, to study the actual conditions under which abscesses formed in veins.[1] His observations proved that the internal coats of veins, like the internal surfaces of serous cavities, might become the seat of inflammation, and that such inflammation might terminate in suppuration. "From attentive examination of abscesses of the lungs, he found many appearances which served to confirm this supposition. He often observed the internal surface of veins leading from such abscesses, not only in an inflamed state, but, in many places, suppurated; and he could even distinctly trace the progress and termination both of the inflammation and suppuration."

[1] Medical and Philosophical Commentaries by a Society in Edinburgh, vol. iii.

It is not a little remarkable, that Hunter, having so closely traced the progress of inflammation of the larger veins in the extremities, and also of the smaller veins in the lungs, should have failed to recognise the relation which these so frequently have to each other. Almost all pathologists who have written upon inflammation of the veins, have, in fact, taken for granted, that the injurious consequences produced were necessarily transmitted by continuity of surface. It was therefore natural enough, that the investigation of the effects of inflammation of the veins should terminate with the appearances of irritation of their lining membrane; and as these could rarely be traced in the direction of the circulation so far as the heart, and never beyond it, the consideration of the disease naturally terminated at this point.

In the dissections which Hunter made, he usually found the abscesses which had formed in the course of the veins accurately circumscribed, being separated from the fluid blood by firm coagula. He, however, showed, in a preparation still preserved in the College of Surgeons, that the coagulum might be absent upon one side, and then, he conceived, the purulent secretion might become mixed with the blood. What the circumstances were which determined the formation of coagula in one case, and not in another, Mr. Hunter did not attempt to define; but the following case which he has left on record, leaves no doubt with regard to his having duly appreciated the important office which they perform.

Case xlii. A man was taken into St. George's Hospital with an inflammation of the arm, in consequence of having been bled in the basilic vein. He died suddenly at the expiration of eight days. Upon examination, the vein was found inflamed; the inflammation extended from the puncture which had been made by the lancet as high as the axilla; it went also some way down below the puncture. The orifice where the lancet had been introduced was yet open, and a probe could easily be made to pass through it. The coats of the vein were much thickened, and even the coats of the artery were affected in consequence of its vicinity to the diseased part. About the middle of the arm the vein had suppurated, and was divided by the abscess into two. Each extremity, like the internal surface of the abscess, was irregular and jagged. From the cavity of the abscess *there was a free passage into the axillary vein.* The cause of the patient's death was attributed to some accidental change in the position of the arm, by which the purulent matter was mixed with the refluent blood, and immediately carried to the heart.

In the dissection of horses which had died after bleeding, Mr. Hunter had traced the inflammation to the heart. To this he attributed the death; thereby giving origin to the notion, since so generally received, that the fatal symptoms arose from the extension of inflammation in a continuous and uninterrupted manner along the lining membrane of the vessels. In dissenting from this opinion, which has been followed by the very great majority of subsequent writers, it is necessary to remark, that in some of the most rapidly fatal instances, the inflammation has not extended far along the veins; and Mr. Arnott has, by a very careful collection of cases, clearly shown that it by no means generally extends to the heart.

It appears to us a most important fact in connexion with the patho-

logy of this disease, that wherever a coagulum is found to have occupied a vein for any length of time, there the coats of the vessel will be found thickened; but that, on the contrary, no change will be found to have taken place where the circulation has remained unobstructed.

In examining the veins of those who die of phlebitis, it is not at all uncommon to see such portions of them as have been blocked up with coagula, thickened by adhesive inflammation, while intermediate portions (which have contained no coagula, or where these have been only recently formed) remain in their natural condition. Specimens illustrating this point may be seen among Dr. R. Lee's preparations in the museum of St. George's Hospital; and the evidence which they afford is not the less satisfactory from the dissections having been made to confirm other and different opinions.

It must be evident, in such cases, that it is the stagnation of the vitiated blood in contact with the lining membrane of the vein, which produces the inflammation; and we submit, that it matters not at what intervals such stagnation may take place. The essential characters of the disease are the same, whether the poisoned blood coagulates through the whole of a vein, or in its different parts; whether in the vessel in which the vitiated secretion is first formed, or in some distant system of capillaries. It is, in fact, the poisoned condition of the blood, and not the extension of the inflammation to any particular part, which gives rise to the severe constitutional symptoms. The inflammation which is set up in internal organs, after bleeding, thus appears to have the same essential characters as that which affects the vein originally wounded. The disease is merely translated from one part of the venous system to another; and we have thus no difficulty in accounting for the multiform character of the secondary affections, of which, otherwise, it would be difficult to offer any rational explanation.

It is important, in the elucidation of the symptoms of this disease, that we distinguish between the coagula formed in veins by vitiated and by healthy blood. The former will irritate and inflame the coats of the veins; while the latter forms the most efficient barrier against the extension of the inflammation. In examining the veins of those who have died of phlebitis, it will sometimes happen that the lining membrane will appear "blood stained". This may occur either with or without any thickening of the coats of the vessel. It is not difficult to account for this appearance when a coagulum has remained in contact with the discoloured membrane; but it is occasionally observed where no coagulum is found upon dissection. It is extremely probable, in such cases, that the appearance is still due to a coagulum of blood having for some time occupied the vessel, and having subsequently been removed, either by the natural force of the circulation, or by accidental causes.

The following case from the Hunterian MSS. (Cases and Dissections) may illustrate this point:

Case xliii. Mr. —— received a blow on the right side of the face, which stunned him, but from the immediate effects of which he soon recovered. He was bled; but the opening in the arm opened, and he bled again. An inflammation came on in the arm, which was very severe; and a suppuration at the orifice took place. He was taken with stupor, sleepiness, and sickness at the stomach. It was,

at the time, doubted whether these symptoms depended upon the blow he had received, or upon the inflammation of the arm. He continued in much the same state until the twelfth day, when he was seized with a most violent shivering fit. He became as cold as possible, subsequently hot, and then covered by a profuse perspiration. He remained all day very low and debilitated, and his arm had less of the fluid red colour than previously. On the fifteenth day he became, in some degree, comatose, lost the power of speech, and died a day or two afterwards.

The preparation of the veins taken from this case, and preserved in the College, shows the cephalic distended through nearly its whole course by a firm clot. This, at the upper part, becomes smaller, and tapers to a narrow flat band, which adheres firmly, by one of its surfaces, to the adjacent wall of the vein. The walls of the vein at this and at the lower part appear healthy; but, in the intermediate portion, they are thick and tough. The median-cephalic and median-basilic veins, and the lower part of the basilic vein, are similarly filled with firm round clots. *The upper part of the basilic vein is pervious; but its inner coat is discoloured, being blood-stained.* An attentive examination of this preparation will, I believe, leave little doubt that the discoloration must have been produced by the contact of a coagulum, which, for a certain time, occupied the cavity of the vessel; and it is not improbable that the period of its dissolution, and its removal into the circulation, was marked by the grave accession of constitutional symptoms, which manifested themselves on the twelfth day. The intensity of the local and constitutional symptoms may not unfrequently bear an inverse proportion to each other. In the case just mentioned, the inflammation of the arm became less apparent at the very time that the really serious symptoms first appeared; and, on the other hand, the following case will show that the constitution may remain comparatively unaffected, even in the severest cases of local phlebitis.

Case xliv. Thomas Baker, a powerful man, of irregular and intemperate habits, was bled in the left arm, on the 28th of March 1851, having, a few hours previously, been thrown from a horse. He had been stunned at the time of the accident, had broken his collar-bone of the right side, and sustained other injuries about the head and chest. On the 7th of April, the wound made in bleeding, shewed a disposition to suppurate; a pad was, at this time, placed upon the vein, above the wound, and retained in position by a moderately tight bandage. The inflammation about the orifice now subsided, the wound healed, and no further attention was, for the time, paid to it. Ten days after this, the bandage from his arm having been removed, he got upon horseback. As the right arm was still disabled, from the fracture of the collar-bone, he was obliged to use the arm in which he had been bled freely. On returning home, he complained that his ride had "shaken" him.

On the evening of the 19th, a sharp pricking and smarting sensation was experienced about the upper and inner part of the arm. He felt uncomfortably warm, and, of his own accord, loosened the bandages that were about his shoulders. On the 22nd, a vivid red patch of inflammation, the size of the palm of the hand, had formed upon the upper and inner part of the arm. This was of a bright red colour,

becoming white for a moment upon pressure. Its outline was, in some parts, tolerably well defined; but, in others, it faded gradually into the colour of the surrounding parts. The inflamed part was very hot to the touch, and exquisitely painful upon pressure. The pulse was quick and full, but not hard; the skin hot, but not dry; the tongue coated with a yellowish brown fur, which was not unusual with him; and the bowels had been freely opened by medicine. The cicatrix of the wound made in bleeding, appeared perfectly well healed, and showed no signs of irritation. A pad was carefully adjusted, so as to make slight pressure over the upper part of the basilic vein; its lower border corresponded with the termination of the redness in the arm. He was ordered bark, with some *liquor ammoniæ acetatis*.

During the two following days, the inflammation extended downwards, in the course of the vessels, and indicated some disposition to spread to the back of the arm. He now continued the bark alone. On the 25th, the redness had extended below the elbow; several large vesicles had formed upon the arm, principally in the direction of the basilic vein; the cicatrix at the bend of the elbow discharged some dark coloured matter,—its edges were tumid and everted; the whole of the inflamed parts were exquisitely sensitive; pulse 108, compressible; he had some comfortable sleep. From this period, the inflammation gradually spread, involving the whole of the arm; the skin lost its bright red character, and became more livid, and abscesses formed slowly in succession, in every part. The inflammation, which spread so extensively in other directions, never encroached upon the situation of the pad, which had been placed over the upper part of the basilic vein. At the time when the inflammation was most intense, the patient became delirious for three or four nights; but this probably depended upon his having been denied his usual quantity of stimulus. With this exception, there occurred no symptoms to indicate that any vitiated fluid had entered the circulation. In this case no shivering occurred, either at its commencement, or at any other period; thus affording a strong contrast to the case last mentioned.

The extent to which the blood may coagulate in the living body, in similar cases, is remarkable. When the whole diameter of a vein is obstructed at any one point, a mechanical impediment is necessarily afforded to the circulation in the smaller veins which supply it. The blood, then, is placed under circumstances favourable to its coagulation in them also; and the same disposition is induced in them as in the larger vessels. The obstruction thus produced in veins will account for the tendency evinced, in some cases, for the inflammation to spread in a direction contrary to the natural course of the circulation; whereas, if no such obstruction exists, it will follow the course of the blood. It is evident that, under these circumstances, it may become an important object in the treatment to place a limb under those conditions which may favour the formation of a coagulum in the affected vein. The local inflammation may, by this means, be increased; but the constitutional affection is prevented. However severe the local symptoms may be, if there be fibrine enough in the blood to form a coagulum, and seal the vessel, the patient is comparatively safe. This observation applies with even greater force to cases of open or divided veins; such as present themselves after childbirth,

on the inner surface of the uterus; or, after amputation, on the suppurating surfaces of stumps.

IV. The difference between the effects produced by the introduction of foreign substances into the blood, when they are retained in the first system of capillaries to which they are conveyed, and those which result when they are allowed to circulate with the blood, is strikingly illustrated by the following experiments.

Experiment xxix. Fifteen grains of crystallized acetate of lead, dissolved without decomposition in rain water, were injected (a third part at a time) into the crural artery of a large dog. Each injection caused very great pain. The limb, after the operation, became completely paralytic, relaxed, and cold. The pulse and respiration were frequent, and there was a good deal of thirst. In the evening, the limb had swollen, but did not in the least recover its heat, its sensibility, nor its motion. The pain continued unabated. The animal died twelve hours after the experiment.

Post-mortem Appearances. All the organs in the interior of the body were healthy; but the limb was much swollen, emphysematous, and infiltrated with reddish serum. The muscles had become of a pulpy consistence, and of a reddish-black colour. The lighter structures had assumed a violet colour; and the whole limb had the appearance of having been affected with gangrenous inflammation.

Experiment xxx. Four grains of tartar emetic, dissolved in an ounce of water, were injected into the crural artery of a large dog. Some pain was apparently experienced during this operation; and the animal subsequently walked a little lame upon the affected leg. From the time of the operation, all food was refused; and violent retching and vomiting came on at the expiration of a quarter of an hour. Much discomfort and restlessness were now apparent. The pulse was small and feverish; but the limb, when handled, in no wise appeared preternaturally sensible (affording in this respect a strong contrast with the limb in the experiment last mentioned). An hour and a quarter after the operation, a kind of diarrhœa came on, accompanied by a repetition of the vomiting. These symptoms recurred occasionally until about three hours after the injection of the fluid, when the animal died.

Post-mortem Appearances. The limb upon which the experiment had been performed presented nothing unusual. The peritoneum was slightly injected, and contained some reddish serum. The stomach also was slightly injected, but only at its pyloric extremity. The mucous membrane of the duodenum throughout was livid, of the colour of the lees of red wine. This appearance was continued into the jejunum; but the other portions of the alimentary canal were apparently healthy. The liver was congested, and mottled upon its convex surface. In some situations its structure was so altered in consistence, as to break down upon very slight pressure. The gall-bladder was healthy, and full of bile, which was neither thick nor dark coloured. The lungs were studded here and there with a considerable number of petechial spots, or small black patches.

Direct experiment, in these instances, affords us the same information which we obtain from the more lengthened observation of cases as they occur in practice; viz. that foreign substances, when introduced

into the blood, in some cases being retained in the part, expend their influence in producing a local, although perhaps a most severe, disease; while in other instances, circulating more freely with the blood, they leave no trace of their entrance into the system, but produce a strictly constitutional affection.

The diseases which we have now to consider, belong principally to the last-mentioned class. It must, however, be remembered, that the two sets of symptoms continually present themselves, in every shade of intensity, in the same case; and that infected blood, which at one period of the disease goes the round of the circulation, may at another be arrested in some system of capillaries, and give rise to an apparently local disease.

Experiment xxxi. An ounce of fluid, resulting from the fermentation of some leaves of beet-root, in about an equal quantity of water, was injected into the jugular vein of a very little dog. At the expiration of an hour, the animal vomited. This was followed by evacuations of the bowels, at first of moderate consistence, but subsequently liquid, and consisting chiefly of mucus. Symptoms of dysentery now made their appearance. There was pain in the stomach upon pressure, difficulty of breathing, and expression of much uneasiness. Three hours after the injection, there were complete prostration of strength, inability to walk, or even to stand; and fresh evacuations of gelatinous mucus, tinged with blood. These symptoms were followed by renewed vomiting of glairy bilious fluid, and discharge of urine. The fluid evacuations from the bowels were now repeated upwards of five times, and were very fetid, tinged with blood, and black as if mixed with soot. Under the persistence of these symptoms, the strength became greatly impaired. The animal was affected with convulsive twitchings of the muscles, and died eleven hours after the injection.

Post-mortem Appearances. The body was opened while yet warm. The lungs were found somewhat dark and congested, but free from inflammation or petechiæ. The intestinal canal, from the pylorus to the anus, was covered with a muco-sanguineous fluid, resembling the lees of red wine. The mucous membrane of the intestine was, however, everywhere healthy, except in the duodenum, the commencement of the jejunum, and the rectum. In these situations it was of a violet red colour, and bore marks of having been inflamed in longitudinal ridges.

Experiment xxxii. Some beef and blood were allowed to decompose in water, at a temperature of about 80 Fahr. Five ounces of this fluid, which was quite putrid, were injected in divided quantities into the peritoneal cavity of a small dog. After the experiment, there was prostration of strength, vomiting, discharge of fæces with tenesmus, and increased sensibility of the stomach. At the expiration of an hour, the vomiting and evacuations, consisting of gelatinous mucus, recurred several times. The animal died nine hours after the operation.

Post-mortem Appearances. About a pint and a half of bloody serum was found in the peritoneal cavity. This was without smell, and of the colour of the lees of wine. The peritoneum was inflamed, of a violet red colour, and presented everywhere patches of ecchymosis or congestion. The inflammation appeared to have been very great, and was accompanied by the formation of dark patches along the course of

the vessels contained in the mesentery. The discolorations were also found at the attached margin of the intestine. The whole of the mucous membrane of the intestinal canal, from the stomach to the anus, was highly inflamed, and of a deep red, violet, or black colour. The folds of mucous membrane which projected into the cavity of the intestine were most discoloured; and in the stomach, these were the only parts inflamed. A glutinous but not bloody mucus was contained in the intestines. The muscular layer appeared in no way to have participated in the affection. The bladder was empty and contracted; it was inflamed on its peritoneal surface, but of its natural appearance within. The left pleura contained some bloody serum. The spleen and the lungs were studded with patches of congestion.

Experiment xxxiii. The last experiment was repeated on a large dog. Two ounces and a half of fluid, obtained from putrid beef, not so thick or fetid as in the preceding case, were thrown into the peritoneal cavity. Very great pain was immediately produced. This was followed by prostration of strength, aversion to food, fever without vomiting, alvine evacuations, and death at the end of ten hours.

Post-mortem Appearances. About two pints of bloody serum were found in the peritoneal cavity. The peritoneum itself was excessively inflamed, of a violet red colour, studded with black patches, and presenting here and there inflammatory adhesions and exudations. The bladder was of a deep red colour externally, but quite of its natural appearance within. The intestines were inflamed on their peritoneal surface, but still more so internally. The mucous membrane, from the pylorus to the anus, was thickened, of the colour of the lees of wine, and coated with mucus. Even those portions of the intestines which (in consequence of having been protected from the contact of the morbid fluid) were not inflamed on their serous surface, were nevertheless affected internally.

The general result of the presence of putrid fluids in the system, whether introduced directly into the circulation, or by absorption from serous surfaces, is, as evinced in the foregoing cases, to produce a remarkable affection, peculiarly characterised by congestion of the mucous membrane of the intestines. The evacuations that accompany this condition, are evidently an effort of nature to relieve the system from the vitiated fluids which have entered the circulation; and it is not a little remarkable, that the mucous membrane of the intestines should in these cases be exclusively affected. The appearances produced may be distinguished from the results of inflammation, in that no thickening or shrinking of the tissues is produced; but they are swollen, congested, and blood-stained, either in petechial spots, in larger patches, or over a continuous surface. The discharge from the intestines, in such cases, consists chiefly of mucus; but this may sometimes be accompanied by a kind of passive hæmorrhage, and occasionally the secretion may assume a puriform character, without any abrasion of the mucous lining of the canal.

We can readily understand, under these circumstances, that the appearances and symptoms which, a few years ago, were so often observed and described as forming a separate disease, under the name of gastro-enteritis, may frequently have been only the secondary results produced by an unhealthy condition of the blood.

When the actions produced by the introduction of putrid fluids into the body are fully developed, all the indications of putrefaction may take place even in the living body. Not only the fluids, but the so-called solids, pass rapidly into decomposition; and the former would appear, in addition to being extremely liable to decompose themselves, to have the property, under certain circumstances, of infecting other parts, and even other healthy bodies. Thus, we read, that during the plague of Marseilles, the bile taken from those who had died of the disease, uniformly produced death when injected into the veins of dogs.

After a putrid element has been introduced into the system, the blood is evidently altered in composition. It becomes black, viscid, and, in a great measure, deprived of its fibrine. After death, it is found fluid, of a very dark colour, and not unfrequently mixed with gas.

It might be, and, perhaps, generally is supposed, that putrid fluids mixed with the blood have the power of preventing its coagulation. The experiments which I have performed on this subject have, however, led me to an opposite conclusion. I have found that the addition of putrid fluids to healthy blood recently drawn promotes its coagulation. It is nevertheless true, that whenever there is manifested a tendency in the body to decomposition, the blood will be found to have lost its power of coagulation; but this effect arises from the continued circulation of vitiated fluid with the blood, and is not the immediate result of their admixture. It is probable, in this as in the former classes of cases, that the foreign substance gradually abstracts the fibrine of the blood, giving rise to small petechial spots, or small patches of congestion in different parts; and whatever may be the coagulating power of the blood when the putrid element is first introduced, it rapidly becomes impaired, or altogether lost.

Of all the substances with which the experiments have been tried, none possesses the power of coagulating blood so rapidly and so completely as pus. To this fact we attribute the formation of the larger patches of congestion found in internal organs when pus has accidentally entered the circulation; and with the more feeble influence of putrid fluids, or of mercury, we naturally associate the formation of the smaller and more circumscribed congestions, where these have given origin to the disease.

Two principal indications arise from the physiological analysis of these affections. *First*, in phlebitis, strictly so called, there may be, and generally is, a twofold disease, namely, a local inflammation, and a constitutional infection. These, although they occur together, give rise to very different symptoms, and may require very different plans of treatment. It may even be strictly in accordance with the soundest principles of pathology, to use remedies to subdue the violence of the local inflammation, at the same time that tonics are administered to support the general strength of the system. *Secondly*, we learn, by direct experiment, that where a putrid element is introduced into the circulation, the mucous membrane of the intestines and the liver are the principal channels by means of which the elimination of the morbid matter is attempted. The functions of the intestines would appear to fit them in a peculiar manner for this office; and it is probably some power connected with their natural action which determines so large a

flow of vitiated blood to their mucous lining. The congestions which arise in other parts, in consequence of a direct infection of the blood, may terminate in the effusion of serum, lymph, pus, or blood, either separately or mixed together in various proportions. In some rare instances, the secondary inflammation may terminate in resolution; of this the following case affords an instructive example.

Case xlv.[1] G. B., æt. 31, was admitted into St. George's Hospital for an aneurism in the left groin, for which the external iliac artery was tied. On the evening after the operation, the whole abdomen became painful and tender; the pulse was frequent, the skin hot, and the tongue dry and brown. The patient was bled, and on the following day the bleeding was repeated. The adhesions of the edges of the wound were destroyed, and gave exit to some sanious matter contained within. On the third day, none of the local symptoms were relieved, and the constitutional symptoms were much aggravated. The right shoulder now became affected with intense pain, accompanied by swelling and tenderness. Half a pint of wine was prescribed to be taken daily, with such nourishment as the stomach could receive. The pain in the shoulder, with some degree of swelling, continued for some time; but on the quantity of the stimulus being farther increased, this, as well as the other symptoms, gradually subsided.

This case is interesting, not only as showing that a secondary inflammation may terminate in resolution, but also as indicating the kind of constitution in which such secondary affections are likely to occur. Three months after the patient was discharged from the hospital as cured, the pulsation returned in the tumour, which again enlarged to a very considerable size. It is therefore evident that the coagulating power of his blood had from some cause been greatly impaired: for had this not been the case, the coagula which had been allowed such ample time to form, would have permanently closed the dilated vessel.

13, Dover Street, Piccadilly, June 1851.

HYSTERICAL AFFECTIONS OF THE HIP JOINT.

By WILLIAM COULSON, Esq., F.R.S.C.Eng., Surgeon to St. Mary's Hospital; and to the Magdalen Hospital, etc.

I was consulted in the case of a young lady, nineteen years of age, pale and delicate looking, of highly nervous and excitable temperament, on account of an affection of the right hip joint, for which she had been under surgical treatment, and for a considerable time confined to the recumbent position. The frequent application of leeches, and the employment of counter-irritation in every possible form, had proved without avail; she lay helpless and bed-ridden, complaining of severe pain extending over the whole lower extremity, and impressed with a firm conviction that she would remain a cripple for life. She shrunk from the slightest attempt to examine the limb, declaring that the pain she experienced was insupportable. My attention, however, was

[1] Related by Sir Benjamin C. Brodie in the *Medical Gazette*.

directed to the fact, that her general health had not suffered to an extent corresponding with what might have been anticipated from the severity of the local suffering, and the duration of her illness and confinement. The head of the femur was evidently in the acetabulum; there were no evidences of thickening or of disorganisation of the structures composing the joints; the pain was diffused, and her exaggerated complaints seemed as much excited when the integuments were lightly touched, as when firm pressure was made over the bones. No persuasions of mine could induce this patient to leave her bed, or to use the limb. I ordered her different preparations of steel, quinine, and other suitable remedies, but there was no perceptible change for the better. She was lying in this helpless state, when intimation was sent her that her father had been suddenly taken ill, and was not expected to live. She was conveyed in an invalid carriage to a distant part of the country, where the family resided, and arrived in time to see her father expire. By this loss, the means of living became much reduced; the family, which was large, could no longer pretend to their former state of affluence, and the different members were called upon, for the first time, to exert themselves to meet their calamity. This young lady upon being made acquainted with the particulars—for misfortune it was none to her—one day suddenly rose from her couch and walked. She exerted herself much, both mentally and bodily, for the good of those around her, seemed to forget her long illness, and has ever since remained well. That the joint was not affected with any organic change is clear from the result of the case. The disease was one of those obscure hysterical affections, more common among the rich than the poor, during which the impression of pain is in a morbidly excited and perverted state, and the power of the will over a certain group of muscles is suspended.

A limb was removed by a surgeon from a patient, whose symptoms, in many respects, corresponded with those in the case I have above related. The girl was in humble life, but well brought up, and was much noticed by some ladies who superintended the school where she was educated. She was of pale complexion, with dark hair and eyes, and of highly excitable temperament. Without apparent cause, severe pain came on in the right knee; the leg became flexed upon the thigh, and the slightest effort at extension excited impressions of intense suffering. She became an interesting object of pity; numerous professional opinions were asked by her patronesses, and frequent visits were paid to her by different surgeons. All, however, urged the necessity of her leaving her bed and using the limb; a measure to which she professed herself unequal. At the expiration of three years, during which her condition varied but slightly, a surgeon was induced, upon her representations, to recommend the amputation of the limb. To this she assented; the operation was performed, and the wound healed without any unfavourable symptom. Upon examination, the joint was found to be perfectly healthy. The synovial membrane retained its normal delicacy and transparency; the articular cartilage was slightly thinned, as is usually the case in a limb which has been long disused; the bones were light and easily sawn, but otherwise healthy; and there were no morbid changes in any of the surrounding structures.

It has been calculated, that at least four-fifths of the females among

the higher classes of society, supposed to be suffering from diseases of joints, are, in truth, affected with hysteria, and with nothing else. As, in the one case, absolute rest is requisite to effect a cure; and in the other, the patient must be urged, nay, even forced to take exercise, in spite of complaints of pain, it is important that the surgeon should be familiar with everything that will assist him to form an early and accurate diagnosis.

In hysterical affections of the hip joint, the patient from the first complains of pain in the part, and not in the knee, as is frequently the case when organic changes are commencing in the joint itself. The pain which the patient describes as most severe is not limited to one spot, but extends over the buttock to the lumbar region, and down the thigh. It is this general diffusion of pain which constitutes one of our most useful distinctions between this affection and disease of the hip joint. From the commencement, the patient complains of such aggravation of pain by pressure and motion, that she confines herself to one position of the limb; and yet upon occasions, when the mind is otherwise occupied, or during sleep, she will move it without complaint. The sensibility of the limb to the touch is frequently so great, that the slightest pressure on any part of the hip or thigh will cause the patient to scream; she shrinks involuntarily from the mere approach of the hand, but nevertheless, upon a careful examination, these morbid conditions will be found to exist more in the skin than in the deep-seated parts. As Sir Benjamin Brodie, who first directed attention to these important affections, observes: "If you pinch the skin, lifting it at the same time off the subjacent parts, the patient complains more than when you forcibly squeeze the head of the thigh bone into the socket of the acetabulum."[1] The more the patient's attention is directed to the part, the more the pain is increased; but if her attention be directed otherwise, she will hardly complain, and the pain does not interfere with her rest. In disease involving the structures of the joint, there is nothing of which the patient complains so much as the inability to sleep at night. Just as "Nature's soft nurse" comes to soothe the suffering and exhausted frame, a sudden start, or pain, or cramp, banishes sleep, and the patient dreads again to close her eyes. In hysterical affections, on the contrary, the sleep is calm and refreshing; and this, perhaps, is a great reason why the general health so slightly suffers, even in long-protracted cases. The pain is anomalous in its character, and different from the result of inflammation, or other organic changes. It may not be always easy to arrive at the truth, for such is the morbid constitution of the mind, that when leading questions have on a previous occasion been put, the patient will, as it were, take the hint, and symptoms, for which we previously may have in vain inquired into, will now actually present themselves. As for the motives for such deception, "to become an interesting object", says Dr. Prout,[2] "is an innate and characteristic feeling of the human mind; and if in early life this feeling in its natural and legitimate form has been thwarted or disappointed, it is almost sure to deviate into some other channel; and the ruling passion is displayed in attempt-

[1] Brodie, Sir B. C. Lectures on Local Nervous Diseases, p. 88.
[2] Prout, Dr. Diseases of the Stomach and Urinary Organs, p. 385.

ing to excite pity and commiseration, when she cannot excite erotic sentiment."

In some instances, there is no visible alteration about the joint or neighbouring parts of the limb; in others, there is general puffiness and tumefaction of the whole hip. The swelling, however, is rarely considerable, and depends on the effusion of fluid into the surrounding areolar tissue. It corresponds with what may be observed in some other neuralgic cases; thus Sir Benjamin Brodie relates a case of facial tic douloureux, attended with severe pain and swelling of the face, although there could be no doubt that the seat of the disease was not in the nerves, but in the brain itself. I have seen similar cases. In one, severe paroxysms of pain, attended with considerable œdema over those parts of the face supplied by the first and second divisions of the fifth, was the result of some obscure disease of the brain, in a man otherwise healthy, of temperate habits, and of powerful frame. When the tumefaction is limited to the immediate neighbourhood of the hip joint, it increases the difficulty of distinguishing this affection from organic disease, more especially as, in some forms of scrofula, the muscular excitement of a subacute character, dependent possibly upon irritation caused by the deposit of tubercle, spreads to the neighbouring parts, producing an undefined fulness and puffiness. In these cases, however, the swelling eventually is more defined, and proceeds from the formation of matter within the joint; in hysteria, the interior of the joint is quite sound.

I have often witnessed the periodical change of temperature mentioned by Sir Benjamin Brodie (*Op. cit.* p. 284), affecting either the joint, or even the whole limb. In the morning it is cold, pale, and shrunk; towards evening there is evidence of a more active circulation, and the surface of the skin is evidently red, hot, and shining. During the night, the heat and redness subside; and these alternations are as regular as the paroxysms of an ague. A patient who was some time under my care, was extremely susceptible of changes of temperature in the part; the knee, the part affected, was usually colder than the opposite joint; but towards evening it became warm, and quite damp with perspiration.

In all these cases, there is a great tendency to muscular contraction, and the limb is thrown into that position which it would assume after the influence of the will is removed, as in sleep. The thigh is bent upon the pelvis, the leg is bent upon the thigh; and, unless means be taken from the commencement to counteract this deformity, it gives the surgeon more trouble than the original complaint. The muscles undergo a sort of atrophy, and become paler than natural; the tendons contract cellular adhesions with parts around, so that very considerable and continued force may be requisite to free the limb, and to bring it to its proper bearings. I have known it necessary for the surgeon to perform the operation of the subcutaneous division of tendons, in the case of a contracted limb in an hysterical girl. Both the outer and the inner ham-string tendons were divided, when the leg was readily extended, and the patient recovered the use of the limb. The muscles about the hip, arising from the pelvis, do in some cases contract in such a manner, as to prevent the patient putting the heel to the ground on a level with that of the sound leg; and at times the limb is even so

much drawn out of its natural position, as to simulate dislocation of the femur upon the ilium.

A young lady, the subject of hysterical hip disease, came under my care, the case having previously been mistaken for disease of the joint, and moxæ applied. The knee was bent; the limb inverted; the thigh rested upon its fellow, and the head of the bone was preternaturally prominent. A superficial observer might have easily mistaken it for dislocation. The most positive assurance on my part could scarcely remove the impression which existed in the minds of the parents that there was no organic disease in the joint, and that there was no necessity to pursue the plan of counter-irritation and confinement. My patient was first directed to take out-door exercise in a carriage; with much trouble the limb was at length straightened; then she was persuaded to attempt to walk; and by these means she ultimately recovered.

Sir Charles Bell relates a case of this kind; and similar cases are not uncommon, in which "the knee was bent almost to the bursting of the ligaments, and the foot turned in so extraordinary a manner that the great toe lay close to the anus."

The age most liable to this affection is from fifteen to twenty; but when once developed, it may continue for a long period. I have met with cases in which the catamenia were irregular or scanty; but in other instances they have not deviated from health. The bowels are sometimes, but by no means invariably, constipated.

I will now sum up the symptoms by which this affection is distinguished from disease of the hip joint. In *the nervous affection*, pain is felt, from the commencement, in the hip, and extends to the loins and down the thigh; there is great general nervous excitability, and extreme sensitiveness in the part; and the patient is from the first unable to walk. Combined with this extreme amount of expressed suffering, the trochanter major retains its proper bearing to the spine of the ileum. There is not the characteristic wasting of the glutei muscles, and consequently no flattened appearance of the nates. Pressure in these situations, where the bone approaches almost the surface, does not excite greater pain than in the other parts. There are none of those involuntary startings during sleep, which cause the patient such intense agony. On the contrary, however loud may be the complaints of the painful condition of the limb while the patient is awake, no sooner is she asleep, than she rests well and calmly throughout the night. In *true hip disease*, the reverse is the case; for, when nature is exhausted by suffering, and the patient faint from want of rest, the sleep, if unaided by the administration of opium, is broken by sudden cramps, shooting pains, and frightful dreams, or vague anticipations of coming pain.

There is one circumstance attending this affection of the joint, which is calculated to mislead the inexperienced practitioner. I allude to its being often described as consecutive to a blow or other injury. In fact, many surgeons believe that there is generally some such cause, which determines the manifestations of these nervous phenomena in any one particular joint. I cannot say that I share largely in this view. Were local injuries alone the exciting cause, the pain would

be equally felt in such constitutions, in whatever joint were the seat of the accident; whereas, it is well known that, in by far the greater number of cases, the neuralgia is in the hip or knee.

As regards the pathology of these affections, we know little. The joint, the seat of pain, offers no abnormal deviations. It may, however, be asked, is not this affection seated in the spinal cord, or in the brain? Can we explain the phenomena of pain and muscular contraction, upon the supposition that the spinal cord, to which all motor and sensitive nerves are attached, is in a morbidly excited state, and that the brain responds truly to the impressions which it receives? Or is it that the functions of the brain are all perverted; and that an inquiry must be conducted upon the same principle as if we were seeking to investigate the reason why, as in the insane, objects are seen which do not exist, and sounds are heard which were never uttered? From the wonderfully sudden change which a strong mental impression can effect in one who is the subject of an hysterical affection of a joint, I am inclined to believe that it is to the sensorium we must mainly look as the organ morbidly affected; although I am fully aware that, in many instances, there are evident proofs of a highly sensitive and excited condition of the cord.

A young lady, nineteen years of age, complained of a constant gnawing pain in the knee joint; of stiffness and weakness, from which she feared a sudden fall. Her parents wished the joint to be strapped and bandaged; but feeling convinced that the disease was of a nervous character, this plan was not adopted. At the time of each menstrual period, the pain was more severe; and when seated at work, or engaged in reading, she was subject to a violent convulsion, without increase of pain, and incontrollable by the will, affecting the muscles of the whole body. It was a strongly marked instance of reflex action; the convulsion being so strong, that she would rise from her seat and forcibly grasp whatever object she was holding. The same phenomena would occur, if, at these periods, she was suddenly exposed to any risk of receiving a blow on the affected knee; the movement then being equally general and involuntary. There was, however, no increased pain; the sensation which the brain appreciated remaining unchanged, however violent the spasm of the leg.

"The existence," says Dr. Conolly, "of an original susceptibility in excess, in the nervous system of hysterical patients, is an assumption warranted, we conceive, by all observation. The natural or congenital constitution of the nervous system, and even of different portions of it, is most plainly discerned to be different in different individuals. From the very cradle may be observed a different degree of sensibility to impressions; and even a different countenance, impressed by the hand of nature herself, before human feelings have written their deeper lines upon it." "In the hysterical patient, we may observe the most intense development of susceptibility, connected with a singular proneness to irregular action, often arising from slight causes; the natural proportion designed to exist between the impressions of the external world, and the sensient human system, being in them not preserved."[1]

[1] Conolly, Dr. J. Cyclopædia of Practical Medicine, Art., Hysteria: vol. ii, p. 576.

With regard to the treatment of this affection, it is obvious that, if it be mistaken for organic disease of the hip joint, the surgeon will be led to adopt a line of practice, not merely useless, but positively injurious. The seat of the disease being in the nervous centre, little can be done locally, with any benefit or relief to the patient. We are, therefore, called upon to direct our remedies to the state of the nervous system generally. The patient must be persuaded to leave her couch as soon as possible. It is useless to wait until the painful sensations have subsided. She must take carriage exercise daily, be in the open air as much as possible, and in the society of lively and cheerful companions of her own age. The diet should be plain and nutritious. In the common forms of hysteria, I find the vegetable tonics more efficacious than the metallic; but, in that now under consideration, they possess no superiority. Their employment, however, is by no means to be laid aside; for in all cases where the tongue is foul, and there are other evident signs of derangement of the digestive organs, they are more beneficial than any preparations of the metals. But under different circumstances, as when the appetite is tolerably good, the tongue clean, and the bowels regular, then it is that the metallic tonics may be tried with great effect. In most neuralgic affections, the preparations of iron prove successful; and among these the carbonate stands justly preeminent. It may be prescribed in as large a dose as the stomach will bear without inconvenience. Among the medicines that directly soothe the pain, none are preferable to valerian; for though much less powerful than opium and belladonna, it neither constipates the bowels, nor enfeebles the system.

"The medicine which I have found the most useful," says Dr. Copland, "is the spirits of turpentine, prescribed in various modes, internally and externally, and administered in enemata; the preparations of iodine, alone, or with narcotics and camphor. These, however, should be associated with suitable adjuvants; amongst which, the several narcotics and antispasmodics are the most important. The warm or vapour bath, simple or variously medicated; mental excitement, and exercise taken regularly and energetically, and employment of the mind, are also important aids in the treatment. The affections of the joints are sometimes accompanied, or even alternated, with severe nervous pains in the extremities, and occasionally with tenderness in some portion of the spine. In such cases the treatment hardly requires any material alteration. In those which have come under my care, I have very frequently prescribed the spirit of turpentine, as already stated, and often repeatedly in enemata; and after two or three doses of it, I have commenced with the preparations of iodine, conjoined with henbane, opium, or belladonna. Whilst the iodine has been given, the turpentine has been administered in enemata, from time to time; and embrocations or liniments assiduously employed."

When the pain has been extreme and almost insufferable, the local abstraction of blood by leeches has afforded relief; but it has been only temporary: and, as the effect of the loss of blood necessarily is to weaken the frame, their application cannot be often repeated without producing permanent mischief.

Counter-irritants, such as blisters, setons, stimulating liniments,

mustard-poultices, and the like, all aggravate instead of relieving the pain. The belladonna or opium plaster, and sedative liniments, are the only local applications which I employ.

It may, however, be fairly questioned to what extent medical treatment in these cases is productive of good, unless there exists some evident derangement, against which our remedies may be directed. Far more is to be effected by moral treatment. Those absurd fancies to which young women of the present day are peculiarly susceptible, and which prevent their giving way to the vivacity and buoyancy of spirits suited to their age, should be carefully checked. The mind should be trained to regain its elasticity, instead of brooding over melancholy forebodings, or seeking to excite sympathy and compassion. The patient (cruel as it may seem) should not be allowed the privileges of a sick-room; nor should she be permitted to recline upon the sofa during the day, an interesting object of solicitude to her friends, and of care to a medical attendant. By being compelled to move the limb, and enter into society, patients have been known to recover, after the complaint had resisted every other kind of treatment.

The time of cure varies. Sometimes it is instantaneous; at other times it is slow. The time, however, does arrive, when this morbid state of the nervous system passes away, and the patient begins, though somewhat late in the day, to feel grateful to those to whose judgment and perseverance she owes her recovery. Above all, let it be remembered, that in this affection, the power of motion is present from the beginning; but the will to exercise it lies dormant, until called into action by some sudden emergency, or excited by moral and remedial means.

REMARKS ON THE NATURE AND TREATMENT OF HAY-FEVER.

By F. W. MACKENZIE, M.D., Physician to the Paddington Free Dispensary for the Diseases of Women and Children, Fellow of University College, etc.

It is well known that the respiratory mucous membrane is in some persons peculiarly susceptible to certain impressions, and readily disposed to take on morbid action in consequence. The perfume of particular flowers in one,—the effluvia from ipecacuanha in another,—the emanations from hay and grass in a third,—the smell of certain animals in a fourth,—and the presence of minute quantities of dust in the atmosphere in a fifth,—will give rise to much irritation of this membrane, and in some cases to severe consecutive constitutional disorder. In what this peculiar susceptibility consists, we neither know, nor shall probably ever discover; but the fact itself is undeniable, and in a practical point of view is one of extreme interest.

In the different instances which have been mentioned, it is probable that a similar state of the mucous membrane is induced in each; and that although the causes may differ, their ultimate action is the same; that this is primarily upon the nervous system, or those parts of it which are more immediately connected with the respiratory mucous

membrane; and that nervous irritation precedes and gives rise to those alterations in the secreting functions of the membrane, together with the other local and constitutional derangements by which the disease when fully developed is characterised.

It would thus appear probable that, however the symptoms, as well as the exciting causes, may differ in different cases, these affections depend upon the same proximate cause, and are amenable to the same general principles of treatment. It is more particularly, however, to the derangement of the mucous membrane produced by the effluvia from hay and grass, that the following remarks are intended to apply.

In designating this disorder, various terms have been used, having reference chiefly to the cause or to the nature of the local or the constitutional derangement. Hay-asthma, hay-fever, hay-catarrh, summer-cold, summer-catarrh—are terms ordinarily in use; but they express very imperfectly the nature of the disorder, and are otherwise not altogether free from objection. The local as well as constitutional symptoms will vary materially in different persons, according to the localisation of the irritation in the mucous membrane, its severity, and the susceptibility of the patient: thus, the portion of membrane lining the frontal sinuses, that of the eyes and eye-lids, the Schneiderian membrane, the mucous membrane of the throat, or that of the trachea and bronchi, may be principally or solely affected in different persons, and accordingly the symptoms will approximate in different cases to those of cephalalgia, ophthalmia, coryza, cynanche, bronchitis, or asthma.

With regard to the pathology and treatment of the affection, it may be remarked, that very little is known; and many persons annually suffer severely from it, who have failed to derive benefit from any treatment that has hitherto been devised. Such was the case in the instance of a gentleman who consulted me about two years ago, and who had relinquished all hope of getting relief from medicine, in consequence of the number of remedies which he had tried ineffectually.

From the state of the mucous membrane in his case, I was led to think that *arsenic* might be beneficial, and more particularly from the analogy which appeared to me to subsist between its pathological condition and that of the skin in some forms of prurigo. It was certainly given with advantage, and the results of its employment in this and other cases have been such as to lead me to think very favourably of it. Whether, however, its efficacy be such as to justify its general employment in these affections, my experience is as yet too limited to enable me to say; but I cannot doubt that it is worthy of a further and more extended trial.

Case. Mr. A. S. had for many years suffered during the summer months from hay-asthma, or rather catarrh; but his present attack had been of unusual severity, partly from the extreme dryness of the season, and partly from his having been obliged to live a great deal in the country during the summer, and consequently much exposed to the emanations from hay and grass. He had been suffering from this attack for many weeks before I saw him, and its severity had told painfully upon him. The whole of the respiratory surface, from the frontal sinuses to the bronchi, was excessively irritable, and in some parts inflamed; the eyes were blood-shot and suffused; the nose pain-

ful and tumid, and the nostrils inflamed and almost excoriated; his throat was dry and rough, and throughout there was a copious defluxion, with lachrymation and coryza. In addition to the local, the constitutional symptoms were severe. The pulse was quick, the skin hot, the tongue furred, the appetite bad, and the secretions from the liver and intestines scanty and unhealthy. The patient was restless at night, and had very little uninterrupted sleep. The continuance of these symptoms had very materially changed his appearance; he had become emaciated, pale, and haggard, and altogether was in a very pitiable condition.

Having learnt that he had consulted many persons, and taken various remedies without benefit, and having no particular treatment to suggest, I had intended leaving without prescribing; but it struck me, during my visit, that there was a close resemblance between the state of the respiratory mucous membrane in his case, and that of the skin in some forms of prurigo; and having often seen the beneficial effects of arsenic in the latter affection, I was led to think that it might be serviceable in the present case. Thus, in both there appeared to be a peculiar or specific irritation of their respective surfaces. Both appeared to depend primarily upon nervous rather than upon vascular disturbance, and each to consist essentially in an exaltation or perversion of nervous action,—the one of the organic, the other of the sensory nerves. Impressed with this view, I recommended a trial of this medicine. It was commenced on the 11th of July, in five-minim doses of Fowler's solution three times a day; and by the 16th nearly every vestige of the complaint had disappeared. The patient, however, was so sceptical in regard to medicine, that he was unwilling to believe that his improvement was attributable to it. He rather thought that the complaint had worn itself out, and this view was favoured by the lateness of the season: my own impression was otherwise; but I was willing to let the matter rest, to be decided by further investigation.

During that year, I saw no other cases of the disease; and it was not until the following summer that I was enabled to make any further observations in regard to it. I had then the opportunity of trying the medicine in several cases, and in all with encouraging success. A professional friend, whose experience and judgment are very great, has also given it, at my suggestion, with much benefit: and it has been given successfully by a practitioner of extensive practice in the country. These facts, so far, are favourable to its employment in these cases; and it is with the view of drawing attention to it, and of eliciting the results of more extended observation, that I am led to publish the present communication.

Of the precise pathological nature, or the proximate cause of hay fever, we are, as has been stated, altogether unacquainted; and we are therefore unable to deduce from a consideration of it any satisfactory method of treatment, and so far must be content to adopt either empirical measures, or such as analogy may suggest. I have remarked that the more obvious symptoms of the disease appear to depend upon, or to be connected with, a morbid irritability of the organic nerves of the respiratory mucous membrane; and that in this respect it presents some analogy to a kindred affection of the skin, characterised by extreme

irritability of the cutaneous nerves, and one at the same time in which arsenic is extremely efficacious. Upon this ground, I was more particularly first led to employ it; but there are other considerations which recommend it to our notice. In the first place, the *origin* of this complaint is very similar to some in which it has been given with much benefit, such as remittent and intermittent fever, neuralgic affections, and some forms of rheumatism, which, in common with hay-fever, are traceable to malaria, miasmata, or vegetable effluvia of various kinds; whilst in the more specific actions peculiar to these, and in the morbid condition of the nervous system which prevails, we see much that is analogous in all. But independently of these more specific diseases, we have many and undoubted proofs of the utility of arsenic, in correcting or controlling irregular nervous actions, and morbid conditions dependent upon them; and its remedial powers in chorea and epilepsy, in prurigo, lepra, psoriasis, and many other cutaneous diseases, may be cited in illustration. Within certain limits, most writers agree in considering it as a tonic; and as such, its action is especially marked upon the skin and the mucous membranes. An eminent practitioner remarked that, for strengthening and giving tone to the former, he knew of nothing equal to it; and in regard to the latter, it has evidently a specific action upon that of the whole respiratory tract. Hence its administration, when given too largely, or for too long a period, is occasionally followed by redness and irritation of the eyes and eye-lids, coryza, dryness of the throat, cough, and symptoms of pulmonary irritation; and, on the other hand, in moderate doses, it has been given beneficially in various irritable and morbid conditions of this membrane, such as is met with in asthma, hooping cough, catarrh, ophthalmia, etc.

Mr. Wm. Simmonds, of Manchester, gives the following report of its employment in hooping cough, in a letter to Dr. Duncan, published in the second volume of the *Annals of Medicine* for 1797, p. 393. "For upwards of three years, I have given arsenic in the hooping cough with the most salutary effect. In general, it has put a stop to the disease in about a fortnight; and it has never failed to moderate it in a few days. I have administered it in one unsuccessful case only, and even then it afforded considerable relief; and had I been called in earlier, or had I been permitted to pay the attention the case required, I am of opinion it would have succeeded in that also. I have used it in the form of the mineral solution of Dr. Fowler; and in the dose, and with the precautions recommended by him in his work on Intermittents, etc., children of a year old may take it with safety. Previous to, and during its use, bleeding, blisters, and emetics may be employed, according to the indications, particularly the latter. It should be continued until the disease is subdued; and then leaving it off for a week, it should then be had recourse to for a week, to prevent a return. Should exposure to cold occasion a relapse, it has hitherto put a stop to it, upon being taken for a few days."

In some forms of ordinary catarrh, I have myself given arsenic with the best results; but more especially in those cases in which the affection has been of a local character, and there has been an absence of inflammatory action, as well as of febrile disturbance. These circumstances forbid its employment; and it is because they so frequently occur in connexion with catarrhal complaints, that it is for the

most part inappropriate. Where, however, there is irritation of the mucous membrane rather than inflammation, as is especially the case in hay-fever, it may be employed with much advantage; as is shown in the following instances.

Case. Rebecca Lord, aged 45, applied at the Paddington Free Dispensary, October 8, 1850, suffering from catarrhal symptoms—sneezing, coryza, lachrymation, cough, and slight fever; tongue furred and unpleasant; bowels open. ℞ Liq. pot. arsenitis ʒj; vini ant. tart., vini ipecac., liq. potas. āā ʒiiss; aquæ distil. ad ʒxij. M. Fiat mistura cujus sumatur ʒj ter die. On the 11th, she was perfectly well; all the catarrhal symptoms had left her. She took eight doses of the mixture: but in twenty-four hours she was relieved of all uneasiness of the mucous membrane.

Case. Mary Ann West, aged 15, applied at the Paddington Free Dispensary, July 26th, 1850, suffering from catarrhal symptoms—coryza, lachrymation, defluxion, cough, sore throat, and slight febrile disturbance. ℞ Liq. pot. arsenitis ♏iiij; liq. potassæ ♏x; aquæ distil. ʒiss. M. Ft. haust. ter die sumendus. July 30. She was free from all catarrhal symptoms, and felt perfectly well.

Case. Margaret Liddon, aged 55, applied at the Paddington Free Dispensary, August 13, 1850, suffering from catarrhal symptoms, together with constrictive pain of the chest, dyspnœa, and cough. She had been troubled with these latter symptoms for some time; throat dry; tongue unpleasant and furred in the morning; bowels constipated; appetite bad. ℞ Liq. pot. arsenitis ♏xxv; liq. potassæ ʒj.; tincturæ hyoscy. ʒij; aquæ distil. ad ʒviij. M. Fiat mistura cujus sumatur pars sexta ter quotidie. Sumat pil. hydrarg. gr. v. August 23. She was entirely relieved of cough and all pulmonary irritation.

In catarrhal ophthalmia, and more especially in those forms which are of a passive, subacute, or chronic character, or where the irritability of the conjunctiva is excessive, arsenic has a very beneficial effect. I might subjoin cases in illustration of this fact, were it not well known to oculists, and referred to in systematic treatises on diseases of the eye.

Lastly, in intermittent headaches, brow ague, cephalalgia, and other affections in which the mucous membrane of the frontal sinuses appears to be the seat of pain, arsenic has proved efficacious. These facts are all of importance, in connexion with the subject of the present communication.

The cases of hay-fever in which I have seen it most serviceable have been of a catarrhal rather than of an asthmatic character; and I have given it, on an average, in doses of five minims of Fowler's solution three times a-day. Where, however, the attack has been slight, or the medicine has been given with the view of improving the tone of the mucous membrane rather than of correcting morbid action, three-minim doses, or even less, are preferable; whilst, on the other hand, if the irritation has been excessive or resists these, larger doses may be given, and their action modified or assisted in different cases by remedies of a kindred character.

Dr. Fowler, to whom we are indebted mainly for our knowledge of the efficacy of the medicine, was in the habit of prescribing it much more largely than is done at the present day. To adults, he gave his solution in doses averaging from ten to sixteen minims twice or thrice

a-day. He mentions that fifty minims were taken by mistake, within the space of nine hours, by a patient, without any very serious consequences ensuing; and that, in one case, twenty drops were taken three times a-day, with speedy and permanent advantage.

Dr. Brown (*Cyclopædia of Practical Medicine*, vol. ii, p. 228), who gave it in many hundreds of cases, states that he never saw any permanently ill effect arise from it. These facts are adduced, as showing the harmlessness of the medicine when properly given, and as meeting an objection which might otherwise be urged against its use.

Arsenic is best given, in this affection, in moderate doses, and I should propose smaller than those recommended by Dr. Fowler, whose experience led him to lay down the following rules for its administration: "Patients from two to four years," he says, "may take from two to four drops of the solution; from five to seven years, may take from five to seven drops; from eight to twelve years, may take from seven to ten drops; from thirteen to eighteen, may take from ten to twelve drops; and from eighteen and upwards, may take twelve drops as a dose." He advises that doses proportional to the age of the patient should be administered three times a-day for five days; then omitted for two or three days; and then repeated for three days, to prevent a relapse. These doses are mentioned with especial reference to the cure of intermittent fevers. They are much too large for the cases under consideration; for which, from one to five minims of the mineral solution may be considered as an average dose, and beyond this it will seldom be necessary to carry it, while positive harm may result. Seeing, indeed, that the state of the mucous membrane is one of morbid susceptibility to impressions, and that the medicine has a specific action upon it, it is important to keep within due limits and so avoid any severe or unfavourable reaction.

When the medicine alone fails to do good, its use may be alternated with quinine, or the two medicines may be given concurrently. Dr. Fowler found this practice successful, in the treatment of intermittent fevers, when either bark or arsenic, singly administered, failed to remove the disease. He observes: "if the solution and Peruvian bark have been given separately, and have failed, it will sometimes be advisable to try the joint power of the medicines at the same time, but in doses rather smaller than usual. In these cases, the solution should be given at stated hours three times a-day, and the Peruvian bark may either be given combined with it, at the same periods or between the fits, in as frequent doses as the stomach can bear." Another useful addition to arsenic, when the irritation of the mucous membrane is severe, or the stomach is unpleasantly affected by it, is opium, in small doses: indeed, its general employment in conjunction with arsenic has been recommended by many practitioners, as being calculated to render its action not only more certain, but less disagreeable to the stomach; and in cases like the present, where the irritability of the part more immediately affected is excessive, its use is otherwise appropriate. It is best given in small doses, not exceeding two or three minims of the tincture or of Battley's solution; and should it derange the stomach, or interfere with the secretory functions of the liver or other organs, some other sedative may be substituted. I have seen very favourable effects from the Indian hemp in cases of morbid irrita-

bility of the nervous system, and these would lead me to recommend a trial of it in the present disease. The most efficacious preparation is the ætherial tincture.

Lastly, when the irritation is most marked in the pulmonary portion of the mucous membrane, and the symptoms are of an asthmatic rather than catarrhal character, ipecacuanha, antimony, squills, or some other expectorant, may be given concurrently with it, if circumstances indicate the employment of such remedies.

But in addition to the more specific treatment of the disease, much may be done in the way of prevention, by invigorating the nervous system, and improving the tone of the respiratory mucous membrane; and measures that fulfil these objects should be perseveringly employed by persons who are subject to these attacks. In particular, the daily use of the shower bath, the application of cold locally to the chest, neck, and shoulders, and the use of cold collyria and gargles, may accomplish much good. The diet and regimen also should be subservient to these ends; and, if there exist an undue irritability of the nervous system, depending on a defective condition of the blood, steel in some appropriate form should be also given.

I would further observe, that when the disease is fully developed, and the irritability of the mucous membrane is very great and distressing to the patient, it may be very much mitigated by the occasional application of the vapour of warm water. By holding the face over a large basin of boiling water, and retaining the steam by means of flannel thrown over the head and shoulders, it is readily and directly brought in contact with the whole respiratory branch, and affords very striking relief to the irritation which exists. Of medicated vapours I have no experience; nor have I seen any benefit derived from the topical application of lotions of the nitrate of silver, etc. Indeed, seeing that the disease is seated rather in the nervous system than the mucous membrane, I should anticipate less benefit generally from local than from constitutional treatment.

These, then, are the principal points to which I would direct attention, in the treatment of hay-fever:—1. to preventive measures, comprehending, more particularly, tonic treatment in every available form, both local and constitutional; 2. to specific treatment, comprising more especially the administration of arsenic, and modified or assisted in the manner proposed, according to the requirements of individual cases; 3. and lastly, to soothing or palliative treatment, which is not inconsistent with the former, but may be advantageously combined with it.

In adverting to these points, and indeed, in treating the subject generally, I have endeavoured to confine myself as much as possible to such deductions as observation and careful reflection would warrant; but the subject is one so imperfectly understood, that I have engaged in it with some hesitation, and rather with the view of offering suggestions than of announcing positive conclusions.

Chester Place, Hyde Park Gardens, June 1851.

BIBLIOGRAPHICAL RECORD.

A Practical Treatise on Diseases of the Urinary and Generative Organs in Both Sexes. By W. Acton, late Surgeon to the Islington Dispensary, and formerly Externe at the Female Venereal Hospital, Paris. Second Edition. pp. 693. London: 1851.

Mr. Acton's well-known book has been so modified and enlarged, as to be virtually a new work; and as such we shall review it. It is divided into two parts; in the first, *Non-specific* diseases following sexual intercourse are treated of; and the second is occupied by *Syphilis*.

In an introductory chapter, Mr. Acton discourses of the origin of syphilis, (which he leaves precisely where he found it—in perfect obscurity); of the frequency of venereal diseases, (which is very great, more so than many imagine, nearly one in five being the subject of them in the army, one in seven in the navy at home, and one in three in the merchant service); and of the necessity of public measures in reference to the sanitary condition of prostitutes. We agree with much that he states, and are quite at one with him as to the worse than folly of refusing admission into our large hospitals to syphilitic patients; but we greatly doubt the possibility of effective legislative interference, and confess to share in the general repugnance which is felt in this country to the adoption of any system of registration, like that which obtains in Paris. That it does not check the prevalence of venereal disease in that metropolis, the source of much of our author's experience abundantly testifies; and that it has, at least, the *appearance* of legalising vice, is also evident. We think, also, that Mr. Acton's sketch of the "harlot's progress" is painted in far too favourable colours; and till we receive better evidence than that adduced, we shall hesitate to believe that well-doing mechanics, clerks, and petty tradesmen, seek their wives among discarded mistresses and the haunters of brothels. Mr. Acton must forgive us for withholding our assent from such a statement; and of expressing our belief that it is a mere fancy or gratuitous assertion of his own.

Blennorhagia is the term which our author applies to those discharges from the genito-urinary apparatus and from the conjunctiva which result from venereal disease. He limits the term *gonorrhœa* to those cases in which the discharge proceeds from the male urethra, employing it then only in deference to long-established use. The microscopic character of this discharge has been investigated by Dr. J. W. Griffiths. "'The secretion of the mucous membrane affected with gonorrhœa consists of muco-pus, but it varies somewhat in character according to the period of duration of the morbid action. In the very earliest stage, it consists of a simple white watery mucous fluid, but in a very short time it becomes yellow,[1] and this condition, in an unchecked gonorrhœa, lasts for some time; ultimately it loses some of the yellow tint, becoming more watery, and remains as gleet. During the very earliest period it consists of simple mucus, and under the microscope exhibits epithelial scales and their débris. During the second stage, it also contains these substances, but, in addition, albumen in solution, which is coagulable by heat, the precipitate not being dissolved by acetic acid; and the microscope detects very numerous pus-corpuscles, upon the presence of which the yellow colour is dependent, together with epithelial scales. In the latter and chronic stages, the number of pus-corpuscles is proportionably dimin-

[1] "In some cases the discharge is milky white, or nearly so, in the two first stages. In these, the corpuscles are of that kind which has been denominated *mucous*, exhibiting the molecular motion, etc."

ished, that of the epithelial scales increased, and the albuminous impregnation is diminished, or disappears.

" 'The urine (excluding the gonorrhœal deposit) in gonorrhœa does not differ essentially from its normal state; it is, however, usually of lower specific gravity, and very commonly contains small crystals of oxalate of lime. The pus-corpuscles increase the density of the deposit, which subsides by repose, so that the latter appears to the eye to contain a more copious and denser deposit than in health. The pus-corpuscles are also somewhat different in appearance from those of normal pus, being rather larger, less granular, more transparent, and less rapidly acted upon by acetic acid; in some the molecular motion is seen, in others not; the former properties depend upon the imbibition of the urine, the latter upon their being surrounded by the mucus, which defends them for a time from the action of the acid. They ultimately yield the same nuclei as normal pus. The urine in gonorrhœa also contains slightly more pavement epithelium from the bladder than the natural fluid; but I have not been able to detect the cylinder epithelium from the urethra to any amount. However, the presence of the pus-corpuscles, without excess of the vesical or renal epithelium, might guide in the diagnosis of the source of the pus.' " (pp. 26-7.)

BLENNORRHAGIA IN THE MALE.

Balanitis, or Gonorrhœa Preputialis. This consists in inflammation and patching excoriation of the glans penis and lining of the prepuce, accompanied by a muco-purulent discharge. The predisposing cause of this complaint is the existence of the prepuce; it does not occur in the circumcised. The exciting cause can be usually traced to the application of some irritating secretion, such as menstrual fluid, blennorrhagic matter, etc. It may arise from inattention to cleanliness. It is also met with in persons who have had abscesses close to the frænum, which have left little fistulæ through which the urine exudes. The only way to cure it in them is to heal the fistulæ. Balanitis may be complicated by abscesses which point at the upper part of the penis. The prepuce may also become gangrenous. Chancre is a very frequent complication, and eczema, particularly in old subjects. Simple balanitis never gives rise to secondary symptoms, as has been shown by M. Ricord's experiments by inoculation.

The treatment of the uncomplicated disease is very simple: it consists in washing the parts, carefully drying them, and by means of dry lint, accurately placed between the glans and prepuce, separating the two surfaces. If a slight inflammatory condition of the parts exist, it will be well to pass a stick of caustic over them, simply to whiten the surface, which should be previously dried by lint. The affected parts should be washed twice daily with a lotion of zinc and tannin, one grain of each to the ounce, then dried, and lint applied as before. When phimosis exists, lint wrapped round a probe should be carefully introduced between the glans and the prepuce, to wipe away all secretion; the prepuce then being gently drawn forwards, a solid stick of nitrate of silver may be introduced and brushed quickly over the surface, warm water being afterwards injected; or a strong solution may be injected, instead of using the solid caustic. If the phimosis be irremediable, the operation of circumcision must be performed. The following is Mr. Acton's method. "Without employing any traction, I trace in ink a line on the prepuce, which follows the circumference of the base of the glans, and is a little in front of it. This being done, the prepuce should be drawn forward and fixed between the blades of a pair of dressing forceps placed in front of the glans, and behind the line of ink traced on the prepuce; let the forceps be then held in this position by an assistant. Let that portion of the prepuce which is in front of the forceps be now drawn forwards by the left hand of the surgeon, while, at the same time, he with the right divides it in the oblique direction of the forceps, which thus protects the glans. In this operation the skin alone is removed, the mucous membrane is not drawn

forward with the skin, and remains intact; if we do not wish to see the phimosis recur, this portion of mucous membrane must be removed. To effect this, I employ a pair of scissors, slitting up the thin layer of mucous tissue as far as the base of the glans; the two portions should then be successively held apart by a pair of forceps, and removed by dividing them at the base of the glans, as far as the frænum, which is divided the last. I generally employ torsion of the arteries in these cases, to check the bleeding; lint dipped in cold water is then applied, and it may be advisable to administer an enema containing opium in the evening, or to prescribe camphor pills to prevent erections. A perfect cure takes place about the twentieth day, and the result is very satisfactory; there is no deformity, nor have we to dread a consecutive paraphimosis." (pp. 76-7.)

Gonorrhœa, or Urethral Blennorrhagia. We need not occupy either time or space by any notice of the progress or complications of this form of disease; our attention will be directed to the treatment, and here we shall quote our author's words.

"When a patient applies to me in the early stages of gonorrhœa, before scalding in making water has come on, or when the acute symptoms have passed, I at once employ a strong solution of nitrate of silver; but, as this efficient mode of treatment may become a very dangerous agent, I always inject the solution myself. The manner in which I proceed is as follows:—Having a solution of the crystallized nitrate of silver at hand, in the proportion of ten grains to the ounce, I desire my patient to make water; and, placing him in an erect position against the wall, I inject a glass syringe full (about two drachms) of the solution into the urethra, and by pressure retain the fluid in contact with the mucous membrane a few seconds. It is as well, in doing this, to suddenly distract the patient's attention by some remark, otherwise the passage of the fluid along the whole length of the canal may be impeded by spasm or contraction of the organ. I then desire the patient to sit down for ten minutes or a quarter of an hour in an arm-chair, and to withstand the desire of making water, which, for the first few minutes, sometimes is very violent.

"The effect of the injection on different individuals is very striking. Some scarcely feel any pain; others suffer for a few moments most acutely; but usually the agony goes off in three or four minutes, and is replaced by mere temporary soreness, so that the patient is able to walk about. I, however, generally recommend him to lie down on the sofa for an hour or so, and keep quiet.

"The quantity of discharge, like the amount of pain, differs greatly in different individuals. Sometimes no further *discharge at all* is seen, and the patient gets perfectly well. More commonly the injection is immediately followed by a large quantity of serous or shreddy exudation, which soaks through the lint. This exudation is followed by a stringy yellow discharge. In a few hours, this gradually becomes again serous, until it completely ceases, and redness of the meatus alone remains, which disappears in a few days.

"Of course, considerable pain would be felt did the patient make water immediately after the injection; but as the bladder has been previously emptied, micturition is not required, and the patient has only to combat for the first few minutes the desire to attempt it, and many hours will elapse before urine will be required to be passed, and by that time the effects of other treatment have been brought to bear, so that scalding is seldom, or never complained of by the patient.

"I have now no fear of leaving my patient, having applied a suspensory bandage, or what answers equally well, a handkerchief passed round the loins, and another tied in front and behind to support the testes, with strict injunctions to abstain from any kind of fluid whatever, so that the urethra should enjoy a few hours repose. On the next morning the discharge has either alto-

gether ceased, or a drop only is to be seen, and in the course of the day a mere weeping from the urethra occurs. The patient may now take fluids in moderation, consisting either of tea or soda-water; but coffee should be strictly prohibited, as well as wine, beer, and spirits. In some cases, towards the afternoon, the discharge returns again. If this becomes green or yellowish, I have no scruple in repeating the injection, with similar precautions; but I seldom have recourse to a third, and my patient is quit of a troublesome complaint in a very few days.

"The effect of nitrate of silver in a strong solution is very surprising, as may be judged of from the previous description. It appears to possess a specific action in changing the vitality of the mucous membrane, substituting for the original inflammation a new one, whose principal characteristic is its short duration: it destroys, likewise, the morbid element.

"Out of the large number of cases that have been treated on this plan, I have never yet seen any ill consequence arise, not even hæmorrhage or retention of urine. I may mention, however, that I have never employed the treatment except in private practice, where I have had the assurance that my patient would implicitly follow my directions. I should not recommend the treatment among out-patients at public institutions, nor, in fact, have I any expectation that any abortive plan will generally succeed with them, but, on the contrary, be attended with such consequences as would soon prevent a surgeon from employing the treatment in private.

"I must, however, confess, that this treatment has not, in my hands, been successful in the treatment of the first attack of clap in young men. In private practice, a consulting surgeon does not attend, generally speaking, very young men with their first attack. Shyness, or not knowing where to apply for advice, perhaps, is the cause; but of the fact there can be no doubt, that I am comparatively rarely consulted for first attacks. When consulted, the complaint has perhaps commenced several days, and the treatment is therefore no longer efficacious. From these circumstances, I am perhaps hazarding a wrong opinion; but, speaking from my personal experience, I would not advise caustic injections to be applied in cases of first attacks. No dangerous symptoms arise with common care; but I have not met with those certain results which have attended my treatment in persons previously affected." (pp. 88-91.)

But with these means Mr. Acton combines the use of copaiba, or cubebs, or both.

In Mr. Acton's experience, as we have seen, this plan has been eminently successful and safe; but that it is not always either the one or the other, is evident from a lecture of M. Ricord's which is quoted, and in which we find a formidable list of evils which may arise during its progress.

When the inflammatory stage has set in before the patient is seen, or when the abortive treatment has been tried and failed, the author adopts the ordinary antiphlogistic treatment, until the acute symptoms have subsided, and then has recourse to specifics and astringent injections. In reference to the last means, we would strongly recommend Mr. Acton's remarks to the notice of our readers, because we feel assured that one great cause of the failure of injections, is the very inefficient way in which they are usually employed.

Chronic Gonorrhœa, or Gleet. The chief point of interest in this section, is the view put forth by the author, that the cause of gleet is the existence of a granular condition of the mucous membrane of the urethra, analogous to that which the speculum reveals in the vagina, in cases of old standing discharges. In the treatment, he examines the passage by a wax bougie, No. 6 or 8. If an irritable unequal surface be detected, he uses the strong caustic injection, and gives copaiba or cubebs; following up by injections of zinc and tannic acid. If incipient stricture is detected, the nitrate of silver is not advisable; but bougies should be passed every other day, astringent injections being used in the intervals.

We pass by the three next sections, which include Stricture, Extravasation of Urine, and Fistula, because, though well worthy of perusal, they present nothing remarkably new to our notice. We may merely mention that Mr. Acton has a somewhat more favourable opinion of cauterisation, in the treatment of impermeable stricture, than we have been led to entertain; and that he has successfully treated the small fistulæ which often form just below the glans penis, by placing the smallest possible quantity of Vienna paste in the external opening. A little slough forms, blocking up the fistula, and cicatrisation follows in a few days; or it may be necessary to re-apply the caustic, on each occasion employing less and less of it.

Affections of the Prostate Gland. The following is M. Ricord's description of acute inflammation of that organ and the vesiculæ seminales:—

"This is a rare complication, depending either on too great intensity of the inflammatory symptoms, or on faults committed during the time the patient is under treatment. When the prostate is affected, all the symptoms become aggravated. There is augmentation of the perinæal pain, throbbing, difficult and painful micturition, or retention of urine, a tendency to constipation, with pain on going to stool, particularly when fæculent matter passes. When the patients attempt to sit down, if they cross their legs, the pain becomes intense, constituting symptoms of inflammation of the prostate. It has been said that a deep indentation on the upper part of the fæcal mass (which it has been asserted is caused by the impression of the enlarged prostate in the rectum), is one of the symptoms of the disease; this mark, however, would be impressed on the semi-solid motion, at the time that it passes the prostate, and those who advance this symptom seem to forget that the fæcal mass has subsequently to pass the anus, a portion of the rectum much smaller than that opposite the prostate, consequently any impression made by the prostate must be effaced. Examination with the finger introduced into the rectum is of great service in the diagnosis; it may determine the degree of swelling of the organ, and whether fluctuation exists, should either be suspected. When one of its lobes, or a part only of one of its lobes, participates in the inflammation, the enlargement will be irregular; sometimes the inflammation only passes along the prostate to attack the vesiculæ seminales; in these cases the enlargement is further separated from the median line, the generative functions take on increased activity, and the patients complain of very painful nocturnal emissions. It is important to be acquainted with these distinctions; for, when inflamed, the vesiculæ seminales present a feeling of distension, which might easily be mistaken for fluctuation. The surgeon can easily conceive the danger that would result, should an incision be made into these organs. The inflammation of the prostate and vesiculæ is followed by very severe local symptoms, but is not always attended with general reaction; sometimes vomiting, constipation, a tympanitic state, together with nervous symptoms, may arise, accompanied with fever. In some instances, I have seen the inflammation extend to the subperitonæal cellular tissue, and attack the peritoneum itself. Abscess in the prostate may open into the rectum, the pus generally escaping with the motion. In the majority of cases, the pus points in the direction of the urethra or bladder, in front or behind the neck of that organ. If into the bladder, pus can only be detected when the patients make water. If, on the contrary, the abscess empties itself into the urethra, the discharge takes place suddenly, at the moment the spontaneous bursting into the canal occurs, and at intervals between the times at which the patients pass their urine. Both these modes of opening of prostatic abscesses may be attended with urinary fistulæ; but should the abscess empty itself into the rectum, a fistulous opening is not to be dreaded. We shall see, in speaking of treatment, that it is best to give issue to the matter as soon after its formation as possible." [*Gazette des Hôpitaux*, 1847, p. 512.]

The diagnosis between this form of disease and inflammation of the neck

of the bladder, is assisted by remembrance of the fact, that the pain in the perinæum is increased on making water, lasting some minutes after the urine has passed ; but the calls to relieve the bladder are not frequent. In inflammation of the neck of the bladder, on the contrary, there is constant desire to micturate, small quantities only passing at a time, but with great relief to the patient.

In this treatment, leeches in large numbers should be applied to the perinæum, or cupping-glasses, warm baths and opiate enemata, with gentle purgatives. But if by these means, the patient is not so far relieved, as to be able to pass his urine freely, Mr. Acton advises immediate recourse to catheterism ; and for this purpose he prefers a silver catheter, having failed in the introduction of elastic instruments, from which the stilet has been withdrawn, according to Sir B. Brodie's plan.

Chronic inflammation and enlargement of the prostate are familiar to all, and need not delay us.

Epididymitis. This is a not uncommon complication of gonorrhœa. The pain commences in the perineum, extends along the course of the cord, and becomes fixed in the back of the scrotum. The discharge somewhat diminishes ; but beyond swelling confined to the epididymis, there are no marked local appearances ; and, by proper treatment and rest, the patient will rapidly recover. If, however, the patient neglects himself and takes exercise, "the consequences soon become apparent ; the swelling in the scrotum increases, great pain is experienced on making the slightest movement, and the patient supports the testicles with his hand, so great is his fear of motion, which aggravates the pain in the course of the cord. At this stage, he is often awoke by great augmentation of pain from nocturnal emissions, and he is surprised at seeing his linen stained with semen mixed with blood. There is, however, occasionally some alleviation of the suffering after an emission.

"M. Ricord states that he has seen pus intimately mixed with the seminal fluid. I have witnessed considerable augmentation of suffering to the dull aching pain in the perinæum when the patient goes to stool. A careful examination of the scrotum at this stage of the affection will show that there is not only redness of the skin, with great augmentation of heat, but that effusion has taken place into the tunica vaginalis. If the surgeon, with the left hand, embrace firmly the affected half of the scrotum, so as to render tense the testicle covered by its envelopes, and with the fore-finger of the right hand gently but suddenly press on the centre, a distinct feeling of fluid will be experienced, and the elastic body of the testicle will be felt below it. Should a lancet be thrust into the point where fluctuation exists, a clear or slightly turbid serum, varying in quantity, will often escape, and the size of the tumour will sensibly diminish. When the fluid thus contained in the tunica vaginalis has escaped, the greater portion of the remaining swelling is found to depend on the epididymis, which is hard and painful, and can be felt distinct from the testicle ; this appears to constitute the disease, at least in the majority of the cases. Effusion may not be confined to the tunica vaginalis ; we often see the subcutaneous cellular tissue infiltrated with serum, and become œdematous or phlegmonous : inflammation may result, and distinct abscesses form. However, when intense suffering has preceded, shooting upward to the loins, when much fever is present, accompanied with hiccup, a tendency to syncope, nausea, vomiting, together with excessive sensibility of the apex of the swelling, we may affirm that the testis itself is the principal seat of the affection ; and if the fluid in the tunica vaginalis has been allowed to escape, the testicle may be found hard, having lost its proper elastic feel, and seems to form a nodulated body which we are unable to distinguish from the epididymis."

The predisposing causes of the disease are fatigue, violent exercise, repeated sexual intercourse, and any circumstance producing excitement of

the organs. Mr. Acton relates a striking case, illustrative of the influence of excited passions (p. 197). Injections he does not believe ever produce it, unless they be used injudiciously. The *direct* cause is inflammation of the urethra; and it is a significant fact, very suggestive of reasons for speedy cure of the original affection, that epididymitis rarely comes on during the first week, when the gonorrhœal inflammation is most acute. From some statistical tables drawn up by Mr. Gaussaile, it appears that the first week presented 3 cases, the second 4, the third 5, the fourth 16, the fifth and sixth 39, two months 2, and three months 1.

Terminations. The organ may recover itself completely. There may be hydrocele, or rarely effusion of pus or coagulable lymph. Abscess of the scrotum may occur, or it may become chronically thickened. The testicle may become hard and irregular, and suppuration occur; when the slough separates, the seminiferous vessels become unravelled, and appear as so many shreds at the opening, and not unfrequently a fungous growth sprouts out.

The *Treatment* at first must be strictly antiphlogistic, and absolute rest be enjoined. If these means fail, M. Ricord recommends a somewhat bold practice:

"In some instances, if in spite of our treatment the disease increases, we should treat it still more actively; if the symptoms become again aggravated, and suppuration occurs, free incisions should be at once made. One of my colleagues, M. Vidal, has very properly recommended that the old plan of Jean Louis Petit should be put in force. This consists in dividing the tunica albuginea, so as to overcome the state of strangulation produced by the inflamed seminal tubes. If orchitis exists, this division of the tunica albuginea is an excellent plan, although the operation might alarm many surgeons: still it is a very simple affair, and puncture of the tunic often takes place in tapping hydroceles, without any ill consequences. We can readily imagine that the division, even in cases of a sound testis, where there is only epididymitis, may do much good; for a swollen epididymis may occasion strangulation of the testicle. The division should be made with a lancet, and extend one or two centimètres in length. Much alarm has been created relative to hernia and protrusion of the tubuli seminiferi, but experience does not bear out such a supposition." Mr. Acton also recommends strapping with mercurial, belladonna, and ammoniacum plaister, in cases of irritable testis.

Acute and Chronic Inflammation of the Bladder. Mr. Acton's descriptions and opinions precisely coincide with, indeed are largely taken from, those of the most established writers, and therefore we need not particularise them.

In obstinate cases of chronic cystitis, he, however, adopts a method of cure which is certainly not common. "Provided these means fail, and unfortunately failures are not uncommon, we must have recourse to the following plan of injecting the bladder with nitrate of silver. To effect this, I pass a gum elastic catheter into the bladder, and draw off the urine, and then, with a glass syringe, which fits accurately to the instrument, I inject the whole of the following solution into viscus: ℞ Argent. nitrat. ʒij; aque destill. ʒiv; M. ft. inject. The immediate consequences are, increased pain, which for the moment is very severe, the urine that is first passed is bloody, and some tenesmus is experienced. In a short time, however, these symptoms abate on the patient keeping his bed, and paying great attention to his diet; at first no liquids should be taken, nor for the first few hours preceding the operation; subsequently the usual quantity of tea or barley-water may be indulged in, and the various balsams, particularly turpentine or spruce, should be prescribed. In a very few days the urine will contain less of this ropy mucus, and ultimately none will be noticed; in other cases, the injection may again be resorted to at the end of four or five days, and repeated until a complete cure is effected. We rarely or ever observe any of the ill consequences which probably might be expected to arise when injections are thrown into this important organ."

In the two next sections, we are presented with a full and very sensible discussion of those quack-patronized subjects, *Spermatorrhœa* and *Impotence*. We entirely commend the spirit in which they are written; and rejoice to find that Mr. Acton is not among the number of those who see the evidences of seminal weakness in every cachectic, low-spirited man who consults them. In the treatment of severe cases of spermatorrhœa, he has found injections of nitrate of silver more successful than the solid caustic, applied after the method advised by Lallemand.

BLENNORRHAGIA IN THE FEMALE.

Blennorrhagia of the Vulva closely resembles balanitis in the male, is produced frequently by the same causes, and cured by the same treatment. "It may affect the epithelium of the mucous membrane only, or, gaining the deeper parts, may occupy the glands or follicles, or even the vulvar glands, which we have compared to Cowper's glands, and which, according to M. Moulinier, ought to be regarded as the organs secreting the venereal virus. In the first stage, before the eye can detect any local change, the patient complains of an unusual sensation in the genital organs, and sexual intercourse is desired; there is itching, redness, heat, and swelling. The secretion now becomes greater; at first it is but the augmented flow of the normal moisture, but soon it becomes irritating, and adds to the inflammatory state. The discharge, however, soon takes on a muco-purulent character, and this is more apparent in proportion as the follicles become the seat of the disease. If the inflammation gains the deeper portions, considerable swelling occurs, which may assume an œdematous character, or become phlegmonous; when the nymphæ, naturally large, become inflamed, their size may increase to such an extent, that they may be protruded beyond the larger labia, and constriction of them take place, resembling what happens in paraphimosis. Not unfrequently, abscess follows these œdematous swellings. In stout women, the complaint may extend laterally to the groins, producing a most offensive discharge, attended with an eczematous state of the skin. The inflammation may likewise gain the apertures of the vulvar glands, which M. Huguier has so well described, and may reach the parenchymatous structure of these glands; and they may be felt through the thickness of the labia, as little abscesses, or they may gradually disappear, or may form cysts, which are not unfrequently found in this situation.

"A very frequent symptom of vulvitis is the exaggerated sensibility of the vulva, which is principally confined to young women. In long-standing cases of vulvitis, the passage may become narrowed so much as to produce a sort of stricture of the entire canal. This blennorrhagic affection of the vulva produces great sexual desire, attended with secretions and lascivious dreams, which, if occurring frequently, appear to weaken the patient considerably.

"*Treatment.* Among prophylactic means, cleanliness stands first. Vulvitis, like balanitis in the male, may come on in consequence of inattention to washing the parts. In the commencement a soothing plan should be employed, and separation of the surfaces attempted, followed by the use of lotions of nitrate of silver, in the proportion of ʒj to ʒij of distilled water, with the addition of warm baths. Under these means a rapid cure results. If the inflammation has gained the deeper structures, the soothing plan is the best, or leeches may be applied to the groins; nitrate of silver lotions may be employed; if a phlegmonous condition of parts occurs, it may be better to rely only on depletion. The moment an abscess is formed, it should be opened; for pus has a great tendency to burrow in the loose cellular tissue, and make its way to the rectum, perinæum, or vulva, and recto-vulvar fistula may result. If the abscess is seated in the vulvar gland, it should be opened early. There is only one circumstance which should cause us to pause; namely, when inflammation occurs around an already formed cyst.

It would be out of place to give a detailed description of recto-vulvar fistulæ; but I may mention that great good will result from compression in the course of the fistula, together with injections of strong solution of nitrate of silver, or cauterising the surface with the solid caustic. This cauterisation should be rapidly executed, if you wish the parts not to retract; sometimes scarification of the edges will do good.

"As a consequence of chronic vulvitis, partial morbid secretion may be observed in the folds of the passage, particularly between the nymphæ and carunculæ. These secretions, which only become apparent when the surfaces are pressed, are very difficult to be got rid of by means of astringent injections or even caustic. They arise from the follicles which are hypertrophied, and being seated at a great depth, can only be reached by a narrow neck. To destroy these diseased parts, a narrow bistoury should be passed into the canals leading to them; a free opening having been made, the surfaces should be freely cauterised, or filled with lint." [*Gazette des Hôpitaux*, 1848, p. 212.]

Blennorrhagia of the Urethra. This is much rarer than the other forms, and is almost always a consequence of sexual intercourse, whereas the other may arise spontaneously. The symptoms resemble those observed in the male, but are usually less severe. The abortive treatment may be successfully tried, the solid nitrate of silver being used, if the case be seen early enough. In the acute stage, antiphlogistic and demulcents are indicated, and subsequently copaiba and cubebs.

Blennorrhagia of the Vagina. Mr. Acton here quotes largely from a paper by M. Boys de Loury, surgeon to the Hospital in Paris, where the registered prostitutes are treated. He finds it to exist most frequently among young girls from fourteen to twenty years of age. The symptoms are itching and heat of the parts, and afterwards pain. On examining the interior of the vagina, we first remark pus lying between the folds, so that the canal presents two colours very distinctly, the furrows being of a yellow or greenish puriform shade, the rugæ of a vivid red. If the pus be removed, the membrane underneath is found of a still brighter red. Sometimes erosions are seen on the surface, in the form of red lenticular spots. In some cases, the disease occupies the entire vagina; in other instances, the two inferior thirds, or even the upper half. In this latter case the os participates in the condition of the vagina, and assumes a brownish red colour, attended with augmented sensibility. A very obstinate form, which may be denominated *papular vaginitis*, is sometimes met with in women in advanced stages of pregnancy.

Vaginitis has by no means always a venereal origin. It is far from uncommon in unhealthy, scrofulous, ill-fed children: and Dr. Cormack and Dr. Barnes have recently described a form of it, which occurs in scarlatina. [London Journal of Medicine for 1850, pp. 869-72.]

Vaginitis is sometimes complicated with urethritis, and with inflammation of the entire pudendum. Abscesses also may form in the labia,—in some cases resulting in phagedæna. The os uteri may also become affected, and even ulcerated. According to M. Boys de Loury's statistics, the average duration of vaginitis, in the acute stage, is thirty-three days; when complicated with urethritis, ulcerations, chancres, etc., it varies from six weeks to two months. Chronic vaginitis lasts from thirty to forty days.

In the acute stage, tepid baths and injections, leeches to the groins, and aperients, should be employed. In the chronic stage, astringent injections, and nitrate of silver are to be used. Mr. Acton applies the latter in the solid form, by means of the speculum. We have seen much good result from a strong solution applied by means of a sponge.

4. Blennorrhagia of the Uterus. This section is scarcely as full and precise as might have been expected. Mr. Acton recognises the frequent existence of non-specific ulceration of the cervix uteri, as, we believe, every man must do, who will take the pains to look for himself, and not suffer his

eyes to be blinded by prejudice. According to his experience, true chancres are exceedingly rare in this situation. But it must not be forgotten, that a woman suffering under discharge from an ulcerated os or cervix uteri, may communicate blennorrhagia to her husband, especially if, from any circumstances, the discharge be rendered of a more puriform character than ordinary.

Blennorrhagia of the Ovary. Mr. Acton believes that, as, in the male, epididymitis frequently results from gonorrhœa, so the female who is affected with blennorrhagia, may have ovaritis. He is inclined to think that the disease recently described by Dr. Hassing, of Copenhagen, as the colic of prostitutes, was of this nature. The same opinion was previously expressed by Dr. Tyler Smith. [London Journal of Medicine for 1850, pp. 756, and 922.]

BLENNORRHAGIA COMMON TO BOTH SEXES.

Blennorrhagic Ophthalmia. Of this very serious disease, Mr. Acton admits two varieties,—one arising from absolute contact of gonorrhœal matter with the eye; the other, of a rheumatic, or catarrhal nature. We must refer our readers to the work for what is said upon both these forms.

Gonorrhœal Rheumatism. Our author fully bears out the general opinion of the extreme intractability of this affection. In many cases, he believes a residence in a warm climate to be the only cure. Several of his patients made full trial of the water system, but without deriving any benefit from it.

Blennorrhagia of the Anus. This is a very rare affection. Mr. Acton has only seen it in cases where unnatural crimes had been committed. Local treatment by nitrate of silver, is the proper method of cure.

NON-SPECIFIC AFFECTIONS FOLLOWING SEXUAL INTERCOURSE.

Warts, vegetations, herpes preputialis, eczema, and excoriations are treated of. We extract Mr. Paget's description of the microscopic character of warts: "The warts examined were specimens of ordinary appearance from the glans penis and the lining of the prepuce. They were narrow-stemmed, and on their broad and flat expanded parts bore a crowd of small and often flattened conical processes. In all cases they were of recent growth, and appeared very vascular. They consisted of two principal substances, namely, an outer epithelial covering, and an inner vascular tissue, like certain forms of rudimental cellular tissue. The epithelial covering was composed of numerous layers of tessellated, scale-like cells, resembling, both in structure and arrangement, the epithelial cells covering the glans and inner surface of the prepuce. The epithelium thus extended over the whole wart formed fully half its substance. The vascular substance of the warts was continuous with that of the thin dermal tissue of the glans or prepuce, and was connected with the subjacent looser cellular tissue. It consisted of a pale and obscurely filamentous blastema, in which were imbedded very numerous bodies, like nuclei, oval, shining, dark edged, well defined, made more distinct by acetic acid, and having no nucleoli. It had all the characters of such nucleated blastema as is found in the rudimental state of many normal examples of fibro-cellular tissue."

In the treatment, Mr. Acton makes no mention of strong acetic acid, which we have found very useful. He recommends powder of oxide of zinc in simple cases; and in more obstinate forms, a powder composed of equal parts of ærugo and pulvis sabinæ.

The section on *eczema* is worthy of attention; for this complaint is often mistaken for syphilis.

In our next number we propose to consider the Second Part of Mr. Acton's volume, which is devoted to Syphilis.

(To be continued.)

The Teeth and their Preservation, in Infancy and Manhood, to Old Age. By Alfred Canton, M.R.C.S.L. pp. 297. London: 1851.

This small volume will repay perusal: it is written by an author evidently as fully acquainted with the scientific as with the practical department of his profession. Not the least useful part is the appendix of prescriptions, which makes the reader independent of the trash so often vended as "dentifrices"; compounds which, in eight cases out of ten, are as valueless as they are dear. The absence of an index, or table of contents, is a fault which ought to be rectified, if a second edition be called for; which, from the character of the book, may be anticipated.

Outlines of Physiology, Anatomy, and Surgery. By William Wilkinson, Surgeon, Private Lecturer on Medicine. 12mo. pp. 412. Edinburgh: 1851.

Mr. Wilkinson has here condensed within very narrow limits a great amount of correct information, and has also clothed it in very simple language. To the embryo student at the threshold of his career, works of this kind are decidedly useful as pioneers,—as preparers of the mind for the perusal of more serious and more ample treatises; but so meagre a book of outlines can be of no value to the properly educated practitioner. *Mary's Grammar* is a capital book for the nursery; but when English grammar has to be learnt in good earnest, the child's decoy must be thrown aside for Murray or Latham. In the same way, the youth who has fairly entered upon his career of medical study ought to be above caring for Mr. Wilkinson's *Physiology, Anatomy, and Surgery*. As a book, then, we have no objections to the work before us; but we demur to the author's estimate of its proper and probable destiny. It is far more likely, we fear, to be used in the grinder's laboratory, than in the harmless way to which we have adverted; and assuredly it is not suited to educated practitioners or *bonâ fide* students of medicine.

Catalogue of Medical and Scientific Works: to which is added a Classified Index of Subjects, including the Names of those Authors who have treated upon them. pp. 83. London: 1851.

This is not a mere bookseller's list, but is a really valuable work. It "is intended to comprise books published within the last five and twenty years, excepting pamphlets and other publications of less than half-a-crown in price." The merit of authorship seems to belong to Messrs. Highley and Son, of Fleet Street.

Practical Remarks on some Exhausting Diseases. By Sir James Eyre, M.D. *Second Edition.* pp. 100. London: 1851.

The object of this small book is to illustrate and enforce the excellence of oxide of silver as a remedy in Epistaxis, Hæmoptysis, Hæmatemesis, Menorrhagia, Hæmaturia, Dysentery, Leucorrhœa, Epilepsy, and Chorea. When a practitioner is engaged in testing the powers of a pet remedy, he is very apt to adopt more favourable conclusions as to its therapeutic value than others are able to justify; and we ought therefore, perhaps, to receive the glowing testimony of Sir James Eyre, as to the efficacy of oxide of silver in the above-named diseases, with a certain amount of caution. Still, from our own experience, we can testify that the medicine is a good one; and undoubtedly the author deserves a considerable part of the merit of bringing its uses and mode of administration prominently before the profession, by the first edition of this work, which appeared in 1845, as well as by papers in the periodicals. It would be unfair in us to give an absolute verdict as to the greater value of gallic acid in most of the affections for which Sir James Eyre prescribes the oxide of silver, as we have not made extensive

comparative trials with the two medicines, and are not aware of any adequate experiments of this kind having been instituted. This much we can aver, however, that we could, *primâ facie*, make out as strong a case for gallic acid, as Sir James Eyre has made out for oxide of silver, though perhaps we could not clothe our monograph in such pleasing language, or conclude it with a peroration at once so plaintive and so powerful as that which we now transcribe.

"The grateful thanks of the author must now, in conclusion, be rendered, not only to those numerous friends (carefully selected, and anxiously retained during a stirring professional life of nine-tenths of half a century), for the help which they have given to him, both literally and orally, in this their united search after truth; the press, too, and the profession very generally, have assisted: one by generous commendation, the other by manfully working with him, trusting to the honest guidance of a stranger; each and all seeking the only reward worthy of the name, the pure and unsordid delight of doing good! Only four individuals were unable, they said, to discover any virtue in the medicine. These gentlemen must either have gone to the wrong laboratory: or there might have been a resisting idiosyncrasy in these medical men—who can tell? However it may have been, all that now remains is, for it to be *distinctly understood*, that the time for suing for information upon our subject, *in formâ pauperis*, is past; the writer declares, *suo periculo*, that there is no medicine so powerful, not only in the diseases already touched upon, but in some others yet to be set forth, as the oxide of silver in small doses." (pp. 109, 110.)

The author generally prescribes the oxide of silver in half-grain doses; but he also frequently gives it in smaller quantities. In cases of violent menorrhagia, he advises the doses to be repeated every five hours.

Nice et son Climat, avec des Notices sur le Littoral de la Méditerranée de Marseille à Genes. Par Edwin Lee. pp. 132. Paris et Londres: 1851.

This is a reprint of a portion of the author's *Manuel du Voyageur Valetudinaire*, the second edition of which, we are informed, is out of print. We do not know why this work by an Englishman, and evidently chiefly intended for the English, should have been written in French. It is, however, pleasantly composed, and contains the necessary information.

Mr. Lee is evidently partial to Nice; but in his details is, upon the whole, discriminating. Gouty, rheumatic, and paralytic patients seem to derive benefit from a sojourn at Nice. As for Genoa, we are told—and not untruly—that it is the worst climate in Italy. The beauty of the ladies is the only thing it appears which can be admired in that city: but even with the fair sex Mr. Lee is not quite pleased. They have abandoned as a head-dress the graceful veil (borrowed centuries ago from Spain), and now they are generally wearing in its place—like the foolish ladies of Madrid—fashionable French bonnets! Having been in Genoa, and having paid some attention to this matter ourselves, we can say with the author, "*le mantilla leur convenait mieux que les modes Françaises.*"

Prevention and Cure of Spinal Curvatures and Deformities of the Chest and Limbs; being the result of many years' experience. By Mrs. Godfrey, Renshaw Street, Liverpool. London: 1851.

Old women have in all ages been famous as quacks, and there is nothing very remarkable in a lady taking up the Spine; except that it had already been pretty well secured by charlatanic and, perhaps, also by other members of our profession. It is a new feature, however, in medical literature for a medical advertisement-book by a female to have the same publisher as the Pharmacopœia, and the sterling volumes of Williams, Robert Lee, Prout, Liston, and others.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

DELIOUX ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE VEGETABLE ACIDS.

Dr. Joseph Delioux, Professor of Materia Medica, in the School of Naval Medicine at Rochefort, has published in the *Gazette Médicale* for May 31, 1851, a valuable paper on the Physiological and Therapeutic Action of the Vegetable Acids. This article we now translate, with merely verbal curtailments.

The therapeutic effects of the vegetable acids are entirely distinct from those of the inorganic or mineral acids. The chemical differences between them are shewn up to a certain point in their pharmacodynamic actions, and hence an identity in their effects as medicinal agents ought not to be expected. The chemico-physiological actions of these two kinds of substances are distinguished chiefly by the following characters:

1. Most—it is incorrect to say all—the mineral acids coagulate albumen powerfully, and are thus plastic caustics (*caustiques plastifiants*) when pure, and more or less powerful astringents when diluted. Such are the sulphuric, hydrochloric, and nitric acids. Phosphoric acid, which has often been incorrectly classed with those which have no power of coagulating albumen, has an entirely distinct action, and is ranged among fluidifying caustics. The vegetable acids, on the contrary, like all organic acids, do not coagulate albumen; hence the strongest of them, employed pure, act as fluidifying caustics, and when diluted, they have no astringent action on the tissues. Tannic acid and its congeners coagulate albumen, but much less than the mineral acids; and the coagulum can be redissolved in an excess of the albuminous fluid. Tannin also acts strongly on gelatine; hence, when it is applied to animal tissues, which consist both of albumen and gelatine, it produces effects in which it is surpassed by no other astringent, and which it has moreover, the advantage of producing without irritation or pain.

2. Mineral acids, when introduced into the blood, do not undergo decomposition; they remain either free or combined, or are sooner or later eliminated. The organic acids, and especially the vegetable acids, when introduced into the blood, always, at least in part, undergo decomposition. The former may impede the circulation, by coagulating the albumen of the blood, and so diminishing its fluidity; the latter, having no coagulating power on the albumen, but often fluidifying it, retard the circulation in an entirely different manner, which will be presently described.

Those vegetable acids which have a strong affinity for bases, which strongly redden litmus paper, and possess a decided taste, have when concentrated, an energetic caustic action: in a lower degree of concentration, they are slightly caustic (*cathérétiques*); when very much diluted, or naturally weak, they have only a slight irritant action, or none whatever. Yet they must not be classed as astringents, if this term be restricted to those substances which condense the albuminous tissues. Viewed in this light, tannic acid and its congeners alone, among vegetable acids, should be considered as astringents. If, however, it be borne in mind that some of the acids, such as the acetic, are volatile, and that volatilisation always involves a certain lowering of temperature, it may be admitted that their application to the surface of tissues has a secondary refrigerating effect, which produces a constriction of the fibres analogous to that which results from pure astringents. It may even be supposed that, by irritating the nervous radicles, they call

into action organic contractility. But they will not be found to be such efficacious astringents as the mineral acids.

The vegetable acids, when absorbed, do not coagulate the albumen of the blood, but rather increase its fluidity. With the exception of tannic acid, they all combine with the alkaline bases in the blood; but the new salts are soon transformed into carbonates, their organic acid being destroyed and burnt up by the oxygen introduced into the system during respiration. To effect this, the acids being composed of carbon, hydrogen, and oxygen, absorb oxygen to form water and carbonic acid, which are expired, while a portion of the carbon is converted into carbonic acid, which combines with an alkali. But the oxygen thus consumed is borrowed from that intended for the arterialisation of the blood. And as the rapidity of the circulation is in a direct ratio to the oxygenation of the blood, the retardation of this movement will be the immediate consequence of the combustion of vegetable acids. This is the true explanation of the temperating action *(action tempérante)* of these acids. It is not based on speculative theories, but on the most positive results of chemical analysis. The fact of the destruction of the vegetable acids, established especially by the labours of Wöhler and Liebig, is well calculated to fix our attention on the power of chemical forces, which the organism holds in reserve; for we find them produce, at a temperature of 38° cent., a degree of reaction which can only be produced artificially at a red heat.

It is not, however, to be supposed that the whole of a vegetable acid, especially when taken in large quantity, is converted into carbonic acid and carbonates. The skin and the kidneys eliminate acids. The sweat is acid, and acetic acid is distinctly found in it; it might therefore be admitted that a certain quantity of this acid, when admitted by the primæ viæ, is rejected by the sudoriparous glands. The urine is normally acid, and owes this character chiefly to uric acid; it only becomes alkaline when, after some time; the urinous products have undergone ammoniacal fermentation. But moreover, in patients under treatment by vegetable acids, these have been detected in more or less considerable quantities in the urine. It has been said, that the organic acids alone can be eliminated in this way: M. Mialhe believes that, as they do not coagulate the albumen of the serum, they easily pass uncombined through the kidneys, while the mineral acids, detained both by their bases and by the albumen which they have coagulated, cannot enter into the urine.[1] But, although it be admitted to a certain extent, that the passage of mineral acids into the urine, is not so easy as that of vegetable acids, yet this power ought not to be altogether denied to the former. The experiments of M. Orfila show that in cases of poisoning with concentrated acids, not only the acetic, tartaric, and oxalic acids can be discovered in the urine, but that the sulphuric, nitric, and hydrochloric can likewise be detected.[2]

It remains to be explained how the mineral acids escape complete neutralisation by the alkalies in the blood, and how the organic acids can in part escape the combustion which commonly takes place in the lungs. The explanation of these phenomena is, I think, furnished by a peculiar anatomical arrangement in the abdominal venous system. M. Claude Bernard has discovered direct communications of pretty considerable size between the vena porta and vena cava, which turn the blood directly from the former into the latter. He also observed that the vena cava possesses: 1, Muscular fibres below the hepatic vein, tending to produce a reflux of the blood. 2, Valves at the level of the renal veins, so that the blood cannot flow farther down, but is obliged to enter the renal veins, which thus act as arteries. This arrange-

[1] Mialhe (M.) Considérations Chémico thérapeutiques sur les Acides. *Union Médicale*, 1848, p. 88.

[2] Orfila. Traité de Toxicologie. 4me Ed. Tome i, p. 86.

ment explains the rapid passage of certain substances into the urine: it also shews how, when fluids have been absorbed in quantities capable of disturbing the hepatic and the cardiac circulation, nature has provided a diverticulum which ensures, in all circumstances, the maintenance of the regular course of the blood. But as this phenomenon occurs when large quantities of aqueous drinks have been taken in, and as the acids are generally administered in a large proportion of water, it seems beyond a doubt, that a portion of the acids may pass, with the excess of their vehicle, through this diverticulum, escaping both the neutralisation by alkaline bases and the combustion in the lungs ; and that it is in this way that the acids appear in the urine, in the same state as when absorbed.

This anatomical arrangement will also explain the rapid appearance of many other substances in the urine, and the innocuity or diminished noxiousness of certain poisons, as well as the varying action of different medicines, in proportion to the quantity of the vehicle in which they are administered; or the amount of solid and liquid matter with which they meet in the alimentary canal.

There is another class of physiological considerations which are important in the administration of acids.

In the animal economy, the great majority of the fluids possess the alkaline character : acidity is only manifested rarely, and as if in exception. In the vegetable economy, the contrary is observed : the acid has the precedence of the alkali.

The three principal humours of the human body—blood, lymph, and serum—are strongly alkaline ; and so are most of the fluids which emanate from the blood. All the recrementitious fluids are thus alkaline ; while an acid character is shewn only in the excrementitious fluids, several at least of which, as urine and perspiration, seem principally intended for the elimination of acids. It may be objected, that secretion of acid takes place on extensive surfaces, both on the skin and on the tegumentary mucous membranes. But the quantity is small, in proportion to the mass of alkaline fluids enclosed in the body or effused on its surfaces. Besides, an acid secretion is almost everywhere accompanied by an alkaline : thus, in company with the sweat, we find the alkaline sebaceous secretion, which completely effaces the acidity of the transpired fluid in certain cutaneous folds : in the vicinity of the acid fluid which exudes from the muciparous follicles, the glands and glandules discharge on the mucous membranes the saliva, pancreatic juice, etc., all of which are alkaline. The antagonism between the acid secretions of the external integument and the alkaline secretions of the internal integument has been too absolutely expressed. The antagonism does exist, but it is on the spot, and not at a distance. All the humours whose office it is to digest alimentary or medicinal substances, owe their efficacy to an albuminoid matter which only acts in the presence of alkalies, not merely in the digestive canal, but also in the blood. In the latter, M. Cl. Bernard has ascertained that sugar is transformed, not only under the influence of alkalies, as had been said before him, but also, as in other parts, of an albuminoid matter. The only exception to this great law is the gastric juice, the pepsin of which acts in the presence of acids.

The moderate use of acid drinks produces a state of calm and comfort in certain febrile and inflammatory conditions ; but they may produce evil and even disastrous results, where wrongly or inconsiderately administered. The abuse of the vegetable acids produces anorexia, dyspepsia, mucous and serous fluxes, atony, paleness, œdema of the tissues, slowness of the circulation with smallness and weakness of the pulse,—the debilitation, in fact, of all the assimilative functions. And the result cannot be otherwise: for they tend to alter the constitutional crasis of all the fluids of the living body, and especially to deprive the digestive fluids of the properties indispensable to the

performance of their elaborative functions, without which nutrition cannot be normally performed. And, if this abuse be pushed so far as to produce acidification of the blood, diabetes might be the fatal consequence, if the ideas of some modern authors on the pathogeny of that affection be correct.

Some good advice may be given to those persons who, while in perfect health, make an immoderate use of acid drinks. These may produce less inconvenient effects during the summer and during hard exercise, than in the winter and when the corporeal forces are inactive; because, under the first named circumstances, the sweat removes from the system those principles whose excess might be hurtful. But they have not the advantages which the seductive attraction of a transient coolness seem to promise; for, after appeasing the thirst, they leave the individual in a state of atony, while a slightly spirituous or cordial drink stimulates and re-animates. An intelligent reform has been effected in this sense in the navy, by the substitution of brandy for vinegar in the drink of sailors in hot seasons or in intertropical countries. Nothing can more clearly shew the pernicious action which is exercised on the economy by the obstinate use of acid drinks, than the experiments made by the coquette threatened with obesity. Vinegar, the common weapon against this enemy of beauty, will at the end of a certain time cause the disappearance of the adipose secretion, and also of the health. She will indeed grow thin; but she will at the same time poison herself.

Physiologists, toxicologists, and therapeutists have ascribed a more powerful effect than I am disposed to allow, to the local effects of vegetable acids. For example, all the modifications which absorption and nutrition undergo in consequence of their abuse, have been ascribed to the astriction produced by their contact. But this hypothesis is contradicted by carefully observed chemical, physiological, and pathological facts. The non-coagulating vegetable acids cannot tan the tissues, nor, consequently, close their absorbent pores; on the contrary, they pass easily into the circulation, and it is in the blood that their action is developed.

Intestinal fluxes may sometimes indeed be restrained by vegetable acids: but this is not to be ascribed to their pretended astringency. Cases of this kind have probably been ill interpreted; and we are the more warranted in believing this, as it is now known that diarrhœa is sometimes kept up by the super-alkalisation of the intestinal juices. The employment of acids would correct this by an entirely chemical action. Some persons consider the digestive canal as a mere tube, through which the matters taken in pass from one end to the other; and that, when the medicinal effect of any substance is required, it is arrested at that part of the canal where we wish it to act. But such persons should remember, that medicines soluble in the stomach, and liquids, when not in great quantity, are absorbed without passing beyond the pylorus; that it is only insoluble medicines, or an excess of fluids, that reach the intestines; that these liquids are readily absorbed by the veins; and that aqueous drinks only descend into the lower part of the small intestine when they have not been absorbed higher up, which is an exceptional case. It is, then, impossible to admit that acids, especially those which do not coagulate, act locally on those parts of the alimentary canal which are the source of the diarrhœa.

In the time of iatro-chemistry, when all pathogeny was founded on the acidity or the alkalescence of the humours, the acids formed the half of therapeutics. Again, in the reign of Broussaism, when irritation was everything in pathology, and gastritis was at the bottom of every irritation, then lemonade shared with diet and bleeding the honour of uniformly and easily curing all diseases. At the present day, acids are found to be far from being so useful as alkaline medicines. The use of the vegetable acids only depends on a small number of indications, which are, however, distinct enough to

warrant their rational employment; but their unseasonable use, or their abuse soon destroys their merit. Alkalies, on the contrary, enter largely into rational treatment: there is less danger in super-alkalising the organic fluids, than in introducing an element incompatible with the regular exercise of the functions which these fluids are intended to fulfil.

The vegetable acids may be divided into THREE GROUPS, each of which is characterised by distinct properties, and capable of special application. This division is also equally rational in a chemical point of view.

I. PURE ACIDS. These shew most distinctly the physiological and therapeutic characters of the vegetable acids. All that has been already said is immediately applicable to them, and it only remains to give a summary of their qualities.

When concentrated, they act as caustics, corroding and often perforating the tissues. When administered internally in that state, they produce all the symptoms of irritant poisoning: their antidotes will then be those of all acids, as magnesia, chalk, soap and water, alkaline solutions, or any substances which, by saturating them, form salts incapable of doing harm. In proportion as they are diluted with water, they lose their irritant properties. They may then, when applied to the surface of wounds, produce a cleansing rather than an astringent effect. They may, through the refrigeration caused by their evaporation, and the irritation which they excite in the organic contractility, give rise to a certain degree of fibrillar astriction, at the same time that they moderate the peripheric heat of the body. Administered internally, in medicinal doses, dissolved in large quantities of water, they refresh, especially if their vehicle be of a low temperature. They are promptly absorbed, and as promptly eliminated by the kidneys and skin, or transformed in the blood into water and carbonic acid; the latter being in part eliminated by the lungs and skin, in part saturated by the alkaline bases in the blood. The result of this combustion is to diminish the arterialisation of the blood: it would seem to keep the arterial blood in a state more or less like venous, as at least M. Orfila has seen in his experiments on acetic acid. It is thus that the cooling effects of vegetable acids can be explained. Giacomini, when he called them *venous hyposthenics*, was wrong in restricting to a portion of the circulation a sedative effect which is exercised over the whole of that system. This hyposthenic effect is aided by a diuresis, which renders still more active the simultaneous ingestion of a large quantity of drink; and it is often increased by secondary diaphoretic effects, connected with the depurative function of the skin in regard to acids. These effects are produced especially when the acidulated drinks are hot, or when, though cool, they are taken by persons under the influence of a high external temperature. In the latter case, the result is exactly the opposite of what is desired; for, by provoking profuse perspiration, the previously existing weakness of the individual must be increased. Finally, if vegetable acids are sometimes useful in modifying a too highly alkaline state of the fluids, they should be used cautiously, and not persisted in; and the nature of the normal crasis of the fluids, adapted to the conditions of animal life, should be always borne in mind.

II. ACID FRUITS. These contain one or more organic acids, especially the tartaric, malic, and citric, to which they owe a part of, but not all, their therapeutic properties. The alkaline bases, here present, act also as efficaciously, and less hurtfully, as temperants, sedatives, and diuretics. Acid fruits are far from producing the same inconveniences as free acids: they present to the assimilative powers a combination of acids with soda, lime, and chiefly potassa, and rendered still more mild by pectin and sugar, so that the oxidation in the blood acts chiefly on a salt formed by a vegetable acid, and the result of the transformation is an alkaline carbonate. Unripe fruits, in which the acids predominate over the sugars and the alkaline bases, produce

well known inconveniences to digestion and nutrition, by super-acidifying the fluids: but ripe fruits act by their alkaline bases as much as, and more than, by their acids. Grapes, for instance, which are rich in bitartrate of potash, render the urine alkaline, and may be employed with manifest advantage in diseases where mineral alkaline drinks are indicated.

III. Tannin and Tanniferous Substances. This group is well characterised. Tannin is met with, more or less modified, in a great number of medicinal substances, which owe to it their peculiar astringent properties. Tannic acid, the only coagulating organic acid among those which are used in medicine, may act in this way much more efficaciously than all the vegetable acids. To it alone may be granted the property of modifying the absorbent power of the tissues by tanning them; and there is no doubt, that, if immoderately persisted in, it will produce great alterations in absorption and exhalation. But its coagulating power is not so great as its property of being absorbed: for, when either dissolved in an abundant vehicle when taken in, or, if it is administered solid, dissolved at a later period by the gastric or intestinal fluids, its plastifying power is diminished as it is diluted, and the coagula formed are susceptible of being redissolved by the alkaline salts in the digestive fluids. When introduced into the blood, its action is less understood than that of other organic acids. It must undergo combustion like them, and a certain degree of excitement of the circulation must result: but the therapeutic effects obtained by its use, and characterised by a general state of astringence and tonicity in the organism, agree better with the hypothesis of a coercing action on the albuminous elements in the blood.

DR. BURROWS ON DISEASES OF THE ANTERIOR MEDIASTINUM: MEDIASTINAL TUMOURS.

Dr. Burrows, in a clinical lecture on the more important Diseases of the Anterior Mediastinum, published in the *Medical Times* for June 7th, 1851, directs special attention to tumours occupying that region. They may be either tubercular or malignant growths: he believes them to be most commonly carcinomatous.

The development of a tumour in the anterior mediastinum is often slow and insidious, and, from its rarity, is often unsuspected. Its existence is more especially indicated—1. By the usual symptoms of irritation and pressure on some portion of a respiratory tube; 2. By various local symptoms, resulting from pressure and obstruction to the return of blood to the heart through the cava superior or its tributary veins; 3. By physical signs, indicating the presence of a solid in the upper part of the thorax, capable of transmitting the heart's sounds far beyond their proper limits, and modifying the respiratory murmur in the upper lobe of one or perhaps both lungs.

In the earliest periods, there are repeated and distressing attacks of urgent dyspnœa, coming on in the night, and resembling spasmodic asthma. During the paroxysm, and even at other times, there is uneasiness immediately above the sternum, in the lower part of the windpipe, and an inclination to cough up something which causes constant discomfort. The dyspnœa may subside after the patient is roused from sleep, and has preserved the erect posture for a short time, or after the expectoration of some viscid mucus. Auscultation and percussion seldom yet give any precise information. If an examination be made during the paroxysm of dyspnœa—which is, however, scarcely practicable—there will probably be heard loud tracheal sounds, masking all other respiratory sounds; or tubular breathing, with rhonchus, will be heard over a considerable portion of the chest. When the asthmatic seizure has declined, the tracheal sounds will subside; some rhonchus or large crepitus may be still heard through a portion of one lung; and sometimes the vesicular murmur is weakened in some portion, while the resonance on percussion is healthy.

The suspicion of some cause of pressure on the respiratory tubes near the bifurcation of the trachea, to which the continuance or frequent recurrence of the above symptoms might give rise, is strengthened by various local signs of pressure and obstruction to the return of venous blood to the heart through the vena cava and its tributary veins. The cutaneous veins about the upper sternum and one clavicle—generally the right—become more conspicuous than natural. The external jugular, the thyroideal, the mammary, and thoracic veins, become permanently enlarged and tortuous ; and the current will probably be ascertained, by making pressure at various points, to be moving in a direction the opposite to that which is natural. After a while, the superficial veins of one upper extremity become enlarged and conspicuous. Œdematous swelling is now observed on one side of the throat, about the upper portion of one side of the chest and in the upper extremity, and, in adult females, in the corresponding breast. This œdema will at last extend to the face, especially the eyelids, which become puffy. The eyes have a glassy, watery look, with rather dilated pupils ; this state of the eyes is not unfrequently observed where there is an obstruction to the passage of blood through the right cavities of the heart.

Careful and repeated auscultation and percussion will now indicate the presence of some solid beneath the sternum, which transmits the heart's sounds far beyond their proper limits, and which seriously impairs and modifies the healthy respiratory murmur in the upper lobe of one lung, and perhaps afterwards in a greater extent. The heart's sounds will be heard distinctly to the summit of the sternum, and to a varying extent, beneath the right clavicle ; but without the peculiar blowing sound which generally attends aneurisms. The pulsation of an aneurism is also absent. The lower portion of the trachea is more or less forced out of its normal situation. The respiratory murmur will be impaired or inaudible over certain portions of the upper part of one lung ; and if any breath-sound be heard, it will be tubular or bronchial. As the case advances, the respiratory murmur is much impaired in the lower part of the affected side. The stroke-sound is dull all over the sternum, over the greater part of the front of the affected side, and posteriorly over the scapula, towards the root and base of the same lung ; while it is resonant in the axilla of the affected side. The dyspnœa, the orthopnœa, and ineffectual cough, together with the above-named physical signs, may lead pleuritic effusion to be suspected. Some may indeed exist ; but it will be quite inadequate to explain all the distressing symptoms of asthma which have been observed. Moreover, the most resonant parts of the affected side are in the axilla and hypochondrium, while the greatest dulness is detected in the subclavian region and towards the root of the lung—phenomena the reverse of those of advancing pleuritic effusion.

The dyspnœa is now urgent and constant, occasionally threatening immediate suffocation. The patient remains in a state of orthopnœa, probably unable to speak or swallow, without bringing on a dreadful increase of suffering. The progress of the disease is well illustrated in the following cases.

Case I. J. L., aged 15, was admitted into St. Bartholomew's Hospital, on March 7, 1850. He was thin, pallid, and delicate looking ; the eyes were slightly suffused ; the lips dry and parched ; skin warm ; pulse 132, very small and soft ; tongue red, with elevated papillæ ; bowels open ; urine abundant. He complained of dyspnœa, and of a peculiar croupy tracheal cough, with copious thin frothy expectoration, and of some pain in the chest, chiefly between the scapulæ. He was supposed to have caught cold about two months ago, since which he had complained of pain in the chest, a bad cough, failing strength, and loss of flesh.

On auscultation, there was prolonged, loud, coarse, tubular breathing all over the right side in front and behind, and less intense tubular breathing in the left subclavian region ; also behind over the upper part of the left

side, while vesicular breath-sound was heard in the left infra-scapular and axillary regions. The stroke-sound was completely dull all over the right side, across the sternum, and over the upper part of the left side before and behind: the resonance was good in the left axilla, and impaired in the lower half of the left side behind.

The dyspnœa, cough, and difficulty of expectoration went on increasing; and the right external jugular, and some other veins of the neck, were found distended, and the trachea was thrust towards the left side. On March 26, there was increasing congestion of the veins of the neck and shoulder, œdema of the right arm, and the trachea passed to the acromial side of the sterno-mastoid muscle. He died on March 29, more from asthenia than apnœa.

Post-mortem Examination, made on the following day by Dr. Kirkes. The lower portion of the trachea was pushed beyond the left sterno-clavicular articulation. On removing the sternum, there appeared a large mass occupying nearly the whole right side of the chest, extending forwards rather beyond the middle line, and passing upwards under the trachea, towards the left sterno-clavicular articulation. In front, the mass was adherent to the sternum; laterally and above, it adhered to the costal pleura, and had caused slight erosion of the upper ribs; below, it extended beneath the level of the fifth rib. The mass appeared to have originated in the tissue of the mediastinum, and to have encroached upon the substance of the upper lobe of the right lung, which was greatly compressed, devoid of air, of a pale leaden colour, and apparently quite free in structure from any portion of the foreign growth. The middle and lower lobes of the lungs were also much compressed, and almost empty of air. This compression, however, seemed to be partly due to a little fluid which occupied the lower part of the pleural cavity. By means of the growth, the heart was pushed unusually to the left side; the large vessels in the mediastinum were elongated and distorted, but apparently not sufficiently compressed to materially interfere with the transit of blood; the œsophagus and trachea were displaced and compressed. The right bronchus passed through the middle of the mass, and appeared very narrow.

The malignant growth was uneven and nodular on its surface; it was covered by a smooth membrane, evidently formed of the pleura. The superficial portions consisted of masses of white, soft, medullary carcinoma. The great bulk, however, was made up of a soft, friable, pale-yellowish material, abundantly infiltrated with dark extravasated blood. This effused blood constituted a large part of the whole mass, and was in many places disposed in large masses, though usually it was scattered in points and streaks in the midst of the reticular yellowish material. Interspersed within this peculiar material were several masses of ordinary soft cancer, reduced to the state of pulp. The left lung and heart were healthy. No other part was particularly examined.

Case II. Miss — aged 26, a patient of Mr. Stewart of Aldersgate Street, was seen by Dr. Burrows on April 6, 1850. She was suffering from severe orthopnœa, and congestion and œdema of the upper part of the body, principally on the right side. No careful or prolonged physical examination could be attempted; but over the greater part of the right lung there were dulness, rhonchus, large crepitation, and transmitted tracheal sounds.

The patient had been in apparent health a month previously; but had been attacked with cough and other symptoms, which had led pleuritic effusion to be suspected. Dr. Burrows suggested occasional doses of chloric ether, and mustard poultices to the chest.

April 8. The chloric ether had afforded some relief, but there were still orthopnœa, œdema, and difficulty of deglutition. Auscultation detected loud tubular breathing, with bronchophony all over the upper part of the right lung before and behind; and there was great dulness on percussion. The breathing was less tubular, and the percussion rather less dull, in the axilla and over the lower part of the same side. The heart's sounds were trans-

mitted to the right side, while the impulse was felt more in the left axilla than normal. The breath and stroke-sounds were nearly normal on the left side. From these symptoms and physical signs, Dr. Burrows diagnosed the existence of a mediastinal tumour, and advised, as palliatives, the continued use of chloric ether and counter-irritants, and iodide of potassium internally and externally. The patient died early in May.

Post-mortem Examination. On removing the sternum, the upper and middle part of the right pleural cavity was found occupied by a large lobulated mass of brain-like cancer, continuous with similar masses in the mediastina, and adherent to the costal pleura, especially in the mammary and axillary regions. Several various sized independent masses of medullary cancer, in different states of softening, and of various shades of colour, from milk-white to dark chocolate, were scattered through the substance of the lung. The lower half of the pleural cavity, and the various spaces between the projections of the malignant growth, contained about a pint and an half of turbid serum. The right bronchus, in its course to the lung, passed through the midst of the mass, and, immediately after entering the root of the lung became very narrow; then it, and nearly all the various branches to their termination, suddenly opened out into wide pouch-like dilatations, interrupted here and there by constricted portions. Many of these dilatations appeared like large cysts, filled with thick, tenacious, puriform mucus. The mucous lining was red, rather coarse, but moderately smooth. The large masses situated in the mediastina, and lying along the bodies of the dorsal vertebræ, had displaced and compressed the roots of the great vessels at the base of the heart; while the superior cava, which was quite encircled by one of the masses, was so extremely reduced in size at its entrance into the auricle, as scarcely to admit of the passage of a narrow probe along its canal. Above this point, the vessel gradually assumed more of its ordinary diameter; its interior was smooth, and it contained no coagula. The inferior cava was rather above its ordinary size. The pericardium contained some turbid serum, in which a few flakes of recent lymph were suspended. Its surface presented numerous patches of vascularity, especially where spread over the roots of the great vessels, and over the nodules of the cancerous masses which projected into the cavity at the base of the heart. The heart and left lung were healthy. No deposits were found in the kidneys, liver, spleen, or other parts examined.

PURULENT PYELITIS: CALCULI IN PELVES OF KIDNEYS.

The following case was related by M. Charcot.

Case. A young girl, aged 18 years, was admitted into the Charity Hospital, under M. Briquet, on March 10; she died on the 20th of the same month. She had had sharp pains in the kidneys at various times for three or four months. There were, however, no symptoms of true nephritic colic; and she stated that she had never passed gravel or calculi with the urine. On admission, there was slight fever, with evening exacerbations; she had some erratic rigors; and there was pain in the loins, increased by pressure, and more severe in the right lumbar region. Percussion shewed that both kidneys were increased in size, but the right more than the left. Five or six days before entering the hospital, she had been attacked with hæmaturia for the first time. After this, the urine, which was in almost normal quantity, became thick and very fetid, and exhaled a gangrenous odour, especially towards the end of her life. When left to stand, it deposited a purulent sediment: the supernatant portion, however, did not become clear, and gave a copious precipitate with nitric acid. On the last two days of life, the patient presented the symptoms of a pretty severe typhoid state. She had no vomiting. The treatment principally consisted in the application of cauteries, by Mayer's process, to the region of the right kidney.

Dissection. Both kidneys were enlarged to almost double their natural size. This was due to a dilatation of the pelvis with fetid pus; its walls

were covered with a green false membrane, and presented in some points ulcerations of a gangrenous aspect and odour. The substance of the kidneys was thinned and flattened, but not otherwise altered. A calculus of the size of a haricot bean was found in the pelvis of each kidney; and the pus in the pelvis of the left kidney also contained one of the size of a large pea. The ureters were double their normal size, and the walls were thickened; they also here and there presented dilatations. The mucous membrane of the bladder was thickened and brown. [*Gazette Médicale de Paris*, May 31, 1851.]

CASE OF HÆMOPTYSIS (?) NEONATORUM.

The history which we are about to quote is published by Dr. Charles G. Adams, in the *American Journal of the Medical Sciences* for April 1851, p. 364 This case was probably one of *congenital purpura*, or what the French writers call *hémorrhagie constitutionelle;* and therefore, as the history given by Dr. Adams does not fully justify the title which he has prefixed to it, we have added a note of interrogation. The nasal and buccal mucous membranes seem as likely as the pulmonary to have been the source of the hæmorrhage. The case, in fact, was an extreme one of the familiar affection termed (so improperly) *icterus neonatorum*, in which, as also in certain congestive fevers, the skin, after purpling, becomes yellow, not from the colouring matter of the bile, but from effusion of blood into the cellular tissue under the skin, the result of hyperæmia, associated with a morbid condition of the blood and the capillaries. The change of colour is identical with what takes place in a bruise. We have compared the report of the *post-mortem* appearances in Dr. Adams's case, with some of those recorded by Dr. Cormack as characterising "the yellow and highly congestive cases" of the fever which prevailed in Edinburgh in 1843-44, and have been much struck with the similarity. In the infant whose case is now to be described, as much as in the cases of fever, the disease was clearly constitutional, involving a morbid condition of the blood.

History. The infant—a female—was born after seven and a half months' gestation. The labour was natural; but the funis was round the neck, and respiration was established artificially. During the first twelve hours, the respirations were feeble, and there was no pulse at the wrist. The infant, afterwards nursed, and cried well, had natural evacuations from the bowels and the bladder, a pulse at the wrist, warmer extremities, and freer respiration. But, about an hour before death, it had a sudden discharge of bright arterial (!) blood from the mouth and nose, with symptoms of suffocation, which led the nurse to think it was dying. It rallied, however, and respiration again became comparatively easy. In thirty or forty minutes, it suffered another similar attack of hæmorrhage, under which it sunk, twenty-four hours after birth. The quantity of blood lost might have been five or six drachms.[1]

Necropsy thirty hours after death. *Exterior.* The skin had universally a uniform yellow tint. Upon the neck and upper extremities were seen numerous petechiæ, or circular livid spots of extravasated blood, varying in size from a diameter of half a line to three or four lines. [These were observed before death.] There was no *rigor mortis.* The *encephalon* was not inspected. *Thorax.* The thymus gland was healthy. The lungs were of a very dark livid colour; and solid, except a small portion on their lower anterior edge (perhaps one or two cubic inches), which was of a more healthy hue, crepitated under pressure, and alone had a specific gravity lighter than water. Upon incision, the solid portion presented a surface almost black, glistening like the cut surface of a coagulum, though less smooth and uni-

[1] The mother's first labour, which had occurred ten months previously, was also premature. The child was born in a putrid state at the commencement of the ninth month. The father is a slender man, and has had two attacks of hæmoptysis.

form. The bronchia, where they could be traced, were filled with a bloody frothy mucus. No tubercles could anywhere be discerned. In the pleural cavities there was a small quantity of straw-coloured serum. The heart contained dark fluid blood: its parietes were tolerably firm. The foramen ovale was closed by its diaphanous valvular membrane. The ductus arteriosus remained pervious. *Abdomen.* Upon laying back its parietes, the liver and spleen concealed from view every other viscus, filling almost the entire abdominal cavity. The peritoneum was natural. The stomach was considerably distended with gas: its peritoneal surface presented numerous lengthened livid spots of extravasated blood, from one to three or four lines in width, partially encircling the viscus, and more abundant and larger towards the cardiac extremity. The intestines—particularly the small intestines (which throughout were of a pink hue)—presented externally dark spots of extravasated blood. The stomach contained three or four ounces of dark-coloured sanguineous fluid, with one or two black coagula floating in it. Its mucous coat was sufficiently firm: it was of a bright rose-colour, from the evident engorgement of minute capillaries, and was quite dark in some places. The ecchymosed spots existed in its thickness, and beneath it. The small intestines contained a considerable quantity of thick bloody mucus, having a slimy aspect and feel. The mucous membrane of the small intestines was considerably softened in some places. The mesenteric glands were enlarged and of a rose-colour. In colour and consistence the liver was natural, though somewhat congested. The gall-bladder was of a very light colour, and comparatively empty. The spleen was natural in colour and consistence; but *somewhat exceeded the average size* and weight of the adult organ.

PATHOLOGY OF DIABETES.

We reprint the following from the 2nd vol. of the *Transactions of the American Medical Association*, pp. 89. "For all practical purposes, in the present state of our knowledge, we may, in the opinion of Dr. Todd, adopt with advantage the following view of the pathology of Diabetes. 'That it is primarily a disease of the mucous membrane of the stomach, whereby an abnormal diastase is formed, which readily converts into sugar such aliments as admit of that conversion; the mucous membrane probably likewise secretes sugar; the sugar thus formed, passes into the blood, and is rapidly eliminated by the kidneys, causing, at the same time, the attraction to those organs of the elements of a large quantity of water.'"

"Very much to the same point are some interesting remarks of Professor Flint, in a late number of his journal *(Prov. Med. and Surg. J.)*, on the pathology and treatment of this affection. 'The presence of sugar in the blood and various secretions other than the urine,' he remarks, 'renders it inappropriate longer to rank diabetes among renal diseases. It is a disease affecting the assimilatory process, in consequence of which, sugar ingested passes unchanged into the blood-vessels, and alimentary principles capable of being converted into sugar undergo that chemical change. The kidneys are involved only as one of the excretory outlets by which this useless saccharine material is eliminated from the system. The hyper-secretory action of the kidneys, (which is probably due to the presence of sugar acting as an excitement,) constitutes an important element of the disease. This will serve to explain, in part, the dryness of the surface, the costiveness, the thirst, &c. The loss of those alimentary principles which contain sugar, or are capable of conversion into sugar, for all purposes of healthy assimilation, will explain the debility, the wasting, and the great gravity of the disease. We have thus advanced a considerable way in our knowledge of this disease; but we are still at a distance from knowledge of the nature of the perversion which the processes of assimilation undergo, and of the ulterior morbid condition upon which the perversion depends. In other words, its true pathology and etiology are still unknown. The knowledge, however, which has been acquired, is not without its practical value.

It prevents, in the first place, treatment based upon the idea of its being essentially a urinary disorder, and other false pathological views, and in this way saves the patient from measures which might prove not only useless, but injurious. This, although negative, is nevertheless not the least important of the advantages which attend an improved knowledge of diseases generally. . . . . Our rational course, in the present state of knowledge, is to endeavour to restore the proper action of all the functions ; and especially to modify and improve the processes of assimilation."

M. Mialhe believes that diabetes "depends upon a want of sufficient alkalinity in the fluids of the body ; that the transformation of amyloid substances into sugar, is not peculiar to diabetic patients ; it is not an accidental phenomenon, but a necessary part of the digestion and assimilation of food ; that this is brought about by an animal *diastase* in the saliva, which he has discovered ; that amyloid substances must in all animals, without exception, be converted into sugar under the influence of this diastase. *But what becomes of this sugar ?* It must participate in nutrition, and, in order to do this, it undergoes certain transformations ; for in the normal state, it is not detected in any of the secretions. Its passage through the kidneys is pathological, and depends upon a disturbance which has its origin in a want of alkalinity in the blood. The alkalies in the blood, M. Mialhe contends, are the principal agents in the digestion and assimilation of saccharine and amyloid substances. The saccharine principle must undergo farther transformations to be assimilable. In the healthy subject, the alkalinity of the blood is sufficient for this decomposition ; but if this be deficient, the transformation fails to take place ; the sugar becomes a foreign body, and is cast off, not only by the kidneys, but by all secreting surfaces, and *we have diabetes.* The cause of this affection may therefore be traced to a defective assimilation of the sugar, through a want of alkalinity in the animal economy. Human blood is naturally alkaline, but would eventually become acid, through the ingesta, but for the counterbalancing effects of especial secretions—the urine and the perspiration, which when normal, are always acid. The saliva and the tears are uniformly alkaline."

PLANTAIN AS A REMEDY IN INTERMITTENT FEVERS.

Dr. Chevreuse, of Charmes-sur-Moselle, relates the following case :

A lady, aged 56, had for some time had attacks of tertian ague, coming on about ten o'clock in the morning, and not leaving her till the night or the next morning. The sweats were very profuse. When Dr. Chevreuse first saw her, which was not until she had been treated without effect by leeches and cupping, he ordered an enema of sulphate of quinine to be given five or six hours before the first stage of the fever. Thirty-five *centigrammes* (about 5½ grains) were given, but they only produced pains in the intestines, and dryness in the throat. The dose was afterwards raised to sixty and then to seventy *centigrammes,* without producing any change. Fifty *centigrammes* were then given by mouth ; and subsequently inunction of quinine as well as other means were tried, but all without success. After the patient had suffered for four months, and was growing thin and losing strength, some of the juice of plantain leaves *(plantago major)* was administered to her. She took about a quarter of a wine glassful before the rigor. The first dose purged her, and increased the fever, which continued this time longer than usual ; but after the second dose, which was given in the same manner, the fever did not reappear, and there merely remained some weakness, which gradually disappeared.

Dr. Chevreuse states that, in many cases, plantain-juice had cut short paroxysms of fever, which had resisted sulphate of quinine. [*Revue Médico-Chirurgicale,* as quoted in *Journal des Connaissances Médico-Chirurgicales,* March 1, 1851.

TREATMENT OF ERYSIPELAS BY THE TINCTURE OF THE MURIATE OF IRON.

Drs. Hamilton Bell and Charles Bell have (in the *Edinburgh Monthly Journal* for June 1851) directed attention to their successful treatment of erysipelas by this preparation of iron.[1] The first object is to have the bowels freely opened. If the erysipelas be mild, fifteen minims of the tincture are administered in water every two hours, till the disease is completely removed. When the attack threatens to be more severe, the dose is increased to twenty-five minims every two hours, and persevered in night and day, however high the fever and delirium. The only local applications ever found necessary, are hair-powder and cotton-wadding. While the chalybeate is trusted to for the removal of the disease, it is necessary that the bowels should be attended to. In podagral erysipelas, the tincture of the muriate of iron has been found equally valuable as in other cases.

Dr. Hamilton Bell thus explains the rationale of the treatment :—"In inflammation, the capillary vessels having apparently lost the power of separating or electing the component parts of the blood which are necessary for functional purposes, and having become, to a certain extent, inert tubes, a stream of blood is admitted, for the circulation of which they are not calculated. In other words, I consider, that in erysipelas, the capillary vessels are in an atonic state."

This hypothesis appears to Dr. H. Bell to be supported by the effect of the treatment which he has adopted in erysipelas,—the cases, he thinks, demonstrating that when an extensive portion of the surface of the body is violently inflamed, producing a high degree of fever and cerebral excitement, the symptoms subside, when the system "is rapidly surcharged with, or brought under the influence of the muriated tincture of iron."

SURGERY.

ESCAPE OF PUS FROM THE PUNCTA LACHRYMALIA: NO LACHRYMAL TUMOUR.

M. Béraud exhibited to the Society of Biology, in Paris, in March 29, a specimen taken from a male subject, about 50 years old. The puncta lachrymalia and ducts were perfectly healthy. There was no valve at their common orifice in the lachrymal sac, such as are present in two-thirds of the cases which he had examined. The lachrymal sac contained a small quantity of puriform matter; it was narrowed in every direction, especially on the left side, where it was reduced to one-half its size. The surface was covered with small openings, the orifices of the glands contained in the sac. There was no valve at the lower orifice of the sac, either on the right side or on the left; according to M. Béraud, it should be present in about half the cases. The nasal canal on both sides was completely obliterated by the mucous membrane of the duct. The lower orifice of the meatus could not be seen. There was no lachrymal tumour or fistula, in spite of the complete obliteration, and of the absence of valves, to which structures M. Béraud attributes a considerable part in the formation of these affections of the lachrymal passages. [*Gazette Médicale de Paris*, May 31, 1851.]

---

[1] Ferri Muriatis Tinctura. *Edin. Pharm.* 1841, p. 104. "Take of red oxide of iron, six ounces; muriatic acid (commercial), one pint; rectified spirit, three pints. Add the oxide to the acid in a glass vessel: digest with a gentle heat, and occasional agitation for a day, or till most of the oxide be dissolved: then add the spirit, and filter."

TREATMENT OF INCURVATION OF THE NAILS.

Mr. H. E. Davidson, in the Boston (U.S.) *Medical and Surgical Journal*, says :—The mode that I have employed, and with the most complete success, for the relief of this difficulty, is the following. A piece of a very light watch spring, of sufficient length to extend across the nail from one edge to the other, is turned into short hooks at the extremities. Two plates of silver, sufficiently thin to be easily pliable in the fingers, are to be cut of an oblong shape, say from one quarter to one-sixth of an inch in width by one-third to two-thirds of an inch in length, with rounded corners, and one end punched with a hole of sufficient size to admit the hooked extremity of the steel spring. The nail should be permitted to attain sufficient length to allow the hooks (which are to be made of the above-described strips of silver) to be insinuated under its edges ; the hooked extremities of the spring are then to be passed into the eyes of the hooks, its centre resting upon the centre of the nail. The spring should not be too stiff, or it will elevate the edges of the nail with too much force, and occasion a painful tension of the soft parts attached to it. The more rapid expansion of the nail will be promoted by enveloping the parts in a wet roller. Where the matrix of the nail, and the nail itself, are sound and healthy, I believe that this method will never fail speedily to restore the nail to its normal condition.

A METHOD OF VACCINATING.

Mr. Edward Crosse makes the following suggestion in the *Lancet*. "I know not whether the following mode of vaccination has been before practised ; if not, perhaps you will favour me by its insertion. It consists in forming a blister, by means of a piece of emplastrum lyttæ, the size of a small pin's head, retained on the arm by adhesive plaster sufficiently long to raise the blister, detaching the cuticle with a lancet, and applying the vaccine virus to the raw surface."

"The struggles of a strong child having prevented inoculation by the ordinary methods, I adopted this plan with success. It was rapidly performed while the child slept. A fairer surface for absorption is presented. And this little operation, insignificant in its execution, though important in its results, is much facilitated, and rendered more certain of success."

CICATRISATION PROMOTED BY OAK BARK.

M. Grusell has lately intimated to the French Academy of Sciences, that charpie suspended in a decoction of oak bark for some days and then dried, forms an admirable dressing after the excision of cancerous tumours, as it preserves the simple condition of the wound, and obtains rapid cicatrisation.

GONORRHŒA IN THE FEMALE TREATED BY INJECTIONS OF URINE CHARGED WITH CUBEBS.

M. Hardy, in a paper recently communicated to the Hospital Medical Society of Paris, announces that he has treated with success a great number of cases of gonorrhœa in the female, by administering cubebs internally, and then employing, as a vaginal injection, the patient's urine. He begins with four grammes daily, and increases the quantity by two grammes daily, till he reaches ten grammes. The urine is injected as soon as it is passed. In three or four days, the mucous membrane assumes its natural appearance, and the discharge ceases ; but it reappears if the injections be discontinued. To confirm the cure, it is necessary to cauterise the mucous membrane of the vagina in eight days with a solution of nitrate of silver. In general, three cauterisations complete the cure. [We cannot help suspecting that the use of the caustic lotion is the best part of the treatment ; and that it might be made to supersede the preliminary proceeding in the majority of cases.]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, APRIL 22, 1851.

JOSEPH HODGSON, ESQ., F.R.S., PRESIDENT, IN THE CHAIR.

APPLICATION OF THE HEAT OF ELECTRICITY IN PRACTICAL SURGERY. By JOHN MARSHALL, ESQ., F.R.C.S. Eng. The author narrated a case of fistulous perforation of the right cheek, in a strumous man, twenty-five years old. A fine platinum wire, 1-50th of an inch thick, was passed through the fistula, so that its ends could be connected with the poles of a Groves' battery, consisting of four cells, each having a platinum surface of thirty-two square inches, and a zinc surface of thirty-eight square inches. The galvanic current was kept up for nine seconds; but little pain was felt from the action of the heated wire; sloughs appeared at both orifices of the fistula; that on the inner orifice came away on the fifth day after the operation; the outer one was separated on the sixth day. On the eighth day, the inner opening was closed; on the eleventh, the outer opening was also closed. A smaller sinus was discovered some days afterwards on the inner surface of the cheek; and by a repetition of the operation, was also cured within a fortnight. Mr. Marshall had employed the *electric cautery* in rectal fistulæ and in internal and external hæmorrhoids, with success. He anticipated that its employment will occasionally be found more advantageous than the knife, scissors, or ligature.

BENEFIT DERIVED FROM THE INHALATION OF CHLOROFORM IN A CASE OF PULMONARY CONSUMPTION. By T. SPENCER WELLS, F.R.C.S. Great alleviation of the cough and sufferings were obtained, without any ill effects.

INHALATION OF CHLOROFORM; ITS ANÆSTHETIC EFFECTS, AND PRACTICAL CASES. By ROBERT DUNN, ESQ., M.R.C.S. After stating the generally admitted threefold division of the nervous system into—*first*, the physical, or excito-motory and reflex; *second*, the nutritive and secretory, or ganglionic; and *third*, the sentient, psychical, and voluntary, or cerebro-spinal system, Mr. Dunn maintained that there is no point in physiology more clearly made out, than that the great hemispherical ganglia are exclusively the seat of perception and its associate, memory—the centre of intellectual action, and of all the operations of thought—"the sole receptacle", in the language of Cuvier, where sensations become perceived and consummated", formed into ideas by their ganglionic action, and where the will exerts its power; but that they are neither the seat of sensation nor of motion. Sensation has its seat in the sensorium commune, or collection of sensory ganglia; and the motor power, in the corpore striata and anterior segmental ganglia of the spinal cord. Sensation and perception ought not to be confounded; they are perfectly distinct, and have their seats in different nervous centres. The former is effected through the direct agency of the sensory ganglia; the latter is mental, and exclusively cerebral. The mechanism (so to speak) of their action is different. While, in sensation, it is direct and single, each sensory ganglion responding directly to the stimulus received, or impression made on its ganglionic centre; in perception, a double ganglionic action is involved. The various sensations or impressions of the sensory ganglia, as the first step in the process, are transmitted through commissural connexions to the hemispherical ganglia; and there, as the second step, become converted, by the ganglionic action of the cerebrum, into ideas, which furnish incentives to intellectual action, and materials for thought. The corpora striata, thalami optici, and corpora quadrigemina, are distinct cephalic ganglia, each exercising a different function; and they, with the nervous centres of the

special senses and the cranio-spinal axis, constitute the nervous apparatus of automatic life. The thalami optici and posterior segmental ganglia of the spinal cord are the great centres of tactile and common sensation; the corpora quadrigemina are not simply the ganglionic centres of vision, but also of simple emotional impulses, readily excited into action by sight, and independently of the cerebrum. The sensory ganglia are the seat of the emotional feelings, or, in other words, of the feelings of pleasure and pain associated with the emotional states; but, with Dr. Carpenter, Mr. Dunn thought that the true emotions, like the moral feelings and the animal propensities, are of a composite nature, involving an intellectual element, in all of which, the feelings are of sensorial, and the ideas of cerebral, origin.

What are the feelings experienced, and the phenomena observed, during the slow and gradual inhalation of the vapour of chloroform? After giving the different degrees of narcotism noted by Dr. Snow, and the quantities of chloroform required to induce them, Mr. Dunn traced the order and sequence of the effects of the inhalation upon the different nervous centres. The sensory and motor ganglia are the first to come under its influence. Sensation is suspended, and immunity from pain secured, while some degree of intellectual consciousness is still persistent. The function of the cerebrum, in the centre of intellectual action, is the next arrested, and coma supervenes—a total abolition of consciousness, reducing life to a series of automatic movements; after this, the medulla oblongata and true spinal centres become involved. The ganglionic system is the last to be implicated; but, with the arrest of the peristaltic action of the heart, life ceases.

What conditions are necessary to secure uniformity of effect, and safety to the patient? These are, that the chloroform be pure, and that the mode of inhalation be slow and regular, with a proper dilution of atmospheric air. There is not a single fatal case upon record, where these conditions have been rigidly observed. The eye of the administrator ought never to be off the face of the patient. Chloroform destroys life as certainly as carbonic acid, if respired until the excito-motory and ganglionic systems come fully under its dominion. In the succession of effects, during its slow and gradual inhalation, the ganglionic system is the last to become involved, and the contractions of the heart the last of the vital actions to be arrested; but the order is reversed when the lungs have been suddenly overcharged with the undiluted vapour, and the patient may die from the direct effects of the chloroform upon the heart, before insensibility has been produced, and the nervous centres of the encephalon affected. As the inhaled chloroform is again eliminated from the blood, and passes off unchanged by the lungs from the body, it may be fairly inferred, that it acts in its integrity, and not by its separate elements, upon the vesicular matter of the nervous centres; and that beyond the direct and immediate effects produced by its presence in the blood upon these centres, no lasting ulterior or injurious effects can reasonably be expected to result from its use.

Its range as a therapeutical agent is in consequence limited, and its effects often transient; but present relief from pain is a boon to the sufferer, and its modus operandi in regard to the different nervous centres points plainly to the class of medical cases in which it has been found to afford relief; viz. neuralgia, spasmodic asthma, delirium tremens, hysteria, hysterical and puerperal, and some other forms of mania,—certain convulsive and spasmodic affections,—puerperal convulsions, chorea, epilepsy, and tetanus. Still, it is chiefly, if not entirely, in the great majority of cases, as an ancillary to the adoption of more efficient curative measures, that we can view it in the light of a therapeutical remedy.

The use of chloroform in midwifery has given rise to much discussion. Its effects must be studied in their relation to the physiology of parturition. In the sequence of effects from the inhalation of chloroform, as the spinal and ganglionic systems, on which the parturient act essentially depends, are the

last to come under its dominion, we run no risk of seriously interfering with or of arresting their action, if we use common prudence in its administration. In cases of excessive motor action, with a rigid and unyielding condition of the os uteri, passages, and outlet, the advantages of anæsthesia are great. In instrumental midwifery, and in cases of turning, when the patient is nervous, restless, or unmanageable, it presents a valuable auxiliary. The fact, that immunity from pain may be secured without the suspension of intellectual consciousness, ought never to be forgotten in obstetric practice.

Dr. Sutherland mentioned that he had advantageously employed chloroform in two cases of epilepsy, in which the "aura epileptica" was present. In one, the fits were suspended for two years; in the other, for not quite so long a period. He had employed it also in some cases of insanity in St. Luke's Hospital, in which it acted as a temporary sedative, but not as a curative agent. He had, however, seen three cases of puerperal mania resulting from the use of chloroform administered during pregnancy. One of these cases occurred in a lady whose epileptic fits had been suspended by chloroform; in the absence of the nurse she had inhaled a great quantity of the agent, and mania was the result. In another case, he had himself administered the agent; and in the third instance, he had received a letter from the gentleman who had attended the case, in which it was stated that the mania came on after the use of the chloroform.

Dr. Copland, after speaking of the great interest of the paper, said, that we should not employ chloroform in organic diseases of the heart, nor in cases of neuralgia, where there was any reason to suspect that there was disease of the nervous centres. He was surprised that no notice had been taken of the effects of chloroform on the lungs themselves. The gist of the first paper was to show the usefulness of this agent in some spasmodic affections of the air-passages. In some cases, however, it might be injurious. In some cases in which chloroform had been used and the patients had died, symptoms of congestive pneumonia had presented themselves, which were regarded as the effects of chloroform, rather than of the operation to which the patients had been subjected. In some cases in which he had been consulted respecting the inhalation of chloroform in operations upon the teeth, he had generally objected to it; for he had seen two cases of congestive pneumonia from that cause, in one of which cases the patient did not fully recover from the disease under six months. It was most desirable not to use chloroform in cases where there was a tendency to lung disease; and this caution held especially good in early phthisis, in which there was usually a tendency to congestive inflammation.

Tuesday, May 13, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Fatty Degeneration of the Placenta, and its influence as a cause of Abortion, Death of the Fœtus, Hæmorrhage, and Premature Labour. By Robert Barnes, M.D. Lond. The author related two cases of delivery at the seventh month. In the first, flooding occurred twice without obvious cause, and unaccompanied by pain, at the third month; and again at the seventh month, when labour followed. In the second case, there was no hæmorrhage previous to delivery. In both cases, death of the child occurred some time previous to delivery. In both cases, the placenta was studded with fatty masses, apparently isolated from the surrounding structure. These masses were firm, yellowish-white, and bloodless. The diseased and apparently healthy portions of the placenta were continuous; and the fatty masses were the result of fatty deposit or degeneration in the proper placental structure. In one case, branches of the umbilical vessels, in an atrophied condition, were traced through several of the fatty masses. In the examination of the minute structure of the altered parts, the author had availed himself of the assistance of Dr. Hassall.

The following conclusions have been arrived at:—The placental villi were thickly studded with innumerable minute spherules of oil. The chorion was much altered; thickened, destitute of nuclei, of a yellow colour, and more or less broken and detached from the vessels. The umbilical capillaries no longer presented nuclei in their walls, these being replaced by spherules of oil. The spherules of oil were contained, some in the chorion, others in the walls of the blood-vessels, many in the intervals or spaces between these. The cavities of the vessels were almost exclusively free from fatty deposition. The vessels were destitute of blood. In some parts, the process had extended to complete disintegration of the original structure. In parts which, to the naked eye, appeared healthy, evidences of fatty deposit and degeneration were observed. A number of specimens of sound placentæ had been examined, and the occurrence of a certain proportion of oil as a normal constituent had been determined. With the exception of a case of fatty degeneration of the placenta, recorded by Professor Kilian, and of which an abstract appeared in the *British and Foreign Medico-Chirurgical Review*, for January, 1851, p. 272, no distinct recognition of the nature of the affection is to be met with. The author thinks that this change of structure promises to throw light on the disputed question of hereditary transmission of predisposition to fatty degeneration. It shows also how rapidly such a change of living structures may take place. The conversion of portions of placenta into solid unyielding structure, and the consequent imperfect attachment of these portions, and of the surrounding healthy structure, to the womb, giving rise to hæmorrhage, and premature labour, may occur possibly during the life of the child. A more frequent occurrence probably is the destruction of the fœtus, in consequence of imperfect nutrition, and by a process of slow asphyxia. Fatty degeneration may also cause abortion in the early periods. With reference to treatment, it was suggested, whether the disposition to this destructive change, if known and established by the observation of preceding pregnancies, might not warrant the induction of premature labour, with the view of anticipating the period at which the fœtus would almost certainly be destroyed if left in the womb. Some suggestions were also offered with reference to the general treatment to be adopted with a view of counteracting the disposition to fatty degeneration before and during pregnancy.

Dr. R. Quain said that fatty *deposition* and fatty *degeneration* were processes entirely distinct in their nature and their effects. The deposition of fat from the blood led to the formation of adipose tissue; fatty degeneration, on the other hand, was a result of the disintegration of albumen and fibrin, and of the tissues into the formation of which they entered. There was here no adipose tissue, but a mere aggregation of granular particles. This disintegration may be witnessed in the formation of adipocire, or it may be made to occur experimentally in dead flesh, and the changes could be then followed by the microscope. It may be observed in various albuminous, fibrinous, and other products in the living body, but beyond the sphere of vascular action, and also in various tissues, the nutrition of which had been modified by inflammation, or obstruction to the blood-vessels. The disease of the placenta under discussion was due to some analogous condition, to inflammatory action, or to some modification of the circulating and nutritive apparatus of the organ, by which the albuminous or fibrinous elements of the blood were retained in the blood-vessels, or extravasated, and then subjected to the process referred to. We were acquainted with a tough, leathery state of the placenta, with calcification of the organ; and the origin of these conditions was to be explained in the same way. It was only by tracing these morbid conditions to the primary lesion which produced them, that we could hope to discover the means by which their recurrence could be prevented.

Dr. C. J. B. Williams said that the whole topic of fatty degeneration

was one of growing importance, not only as constituting a serious lesion in itself, but also as forming a remarkable element, of very common occurrence, in several other morbid processes, in cachectic states. He thought that Dr. Barnes had clearly established the existence of fatty degeneration of the placenta in the cases narrated; but he could not admit it to be probable that this was the primary lesion, or one against which practical measures, to prevent abortion, could be profitably directed. The author had too much regarded fatty degeneration as an independent and original vital process, like that causing hypertrophy, or malignant disease, instead of being, as it truly is, a chemical transmutation of fibrinous or albuminous deposits or textures, consequent on a failure of that degree of the nutritive process necessary to maintain a higher order of structure. One of the earliest observers who had set this matter in its true light was Mr. Gulliver, who, in his paper on the "Atheroma of Arteries", published in the Society's *Transactions*, and subsequently in his editions of Gerber and Hewson, had made known many examples of fatty degeneration of deposits and textures, and had suggested the probability that the change is chiefly chemical. About the same time, he (Dr. Williams) had compared this fatty transmutation in the living body to the conversion of dead flesh into adipocire; and had cited numerous instances, in which the products of inflammation and obstructed natural tissues undergo more or less of a similar change during life. The later researches of his friend Dr. R. Quain seemed to him (Dr. Williams) to have completely established this view, and to have further traced many of the modes in which impeded nutrition promoted the degradation of the natural tissues into molecular fat.[1] It seemed to him (Dr. Williams), that it might now be received as a general law, that whenever tissues or deposits are imperfectly supplied with blood, yet are sufficiently nourished to keep them from becoming dry or decomposed, there will be found the process of fatty transformation, more or less resembling the same change which takes place out of the body. Thus, imperfectly-organized lymph in the pleura, pericardium, or peritonæum; lymph in the texture of the lung or of cellular membrane; fibrinous clots in vessels; blood-clots in the brain; soft, recent enlargements of complex organs, as of the liver, kidneys, testicle; crude tuberculous masses, and torpid growths, non-malignant and malignant, had been repeatedly found by him (Dr. Williams) to afford, under the microscope, the clearest evidence of falling under this law. This law is, in fact, a most satisfactory clue to much that has been hitherto obscure in pathology, and unravels much of the mystery of the processes of softening of tissues, maturation of abscesses and tubercles, the breaking down of consolidated masses in spongy organs, and the weakening and wasting of muscular and glandular structures. But this view would teach us to look beyond the mere fatty degeneration itself to the impaired or obstructed circulation, and sometimes altered condition, of blood, which was its cause; and, as in the case of the fatty portions of the placenta, of which they had been hearing, it must often remain a question whether the degeneration was not *rather the consequence, than the cause.*

Mr. Streeter hoped the monograph just read would be published in the *Transactions*, where no disease of the placenta, except Dr. R. Lee's case of adhesion to the scalp, had as yet been recorded.

Dr. Robert Lee endeavoured to throw doubt upon the existence of fatty degeneration of the placenta.

Dr. Barnes had not been convinced of the necessity of the distinction Dr. R. Quain had drawn between fatty deposition and degeneration. He felt great diffidence in dissenting from the explanation of these cases given by Dr. Williams; but he could not admit that the fatty degeneration was the result of the death of the fœtus, or of previous disease in the placenta.

---

[1] London Journal of Medicine, July 1850, p. 705.

The history of the cases, and the development which the fœtus had in both instances attained, convinced him that the fatty degeneration was the cause of the death of the fœtus; and no evidence of any other disease or morbid deposit was detected in the placentæ. The affection had been traced in the apparently healthy portions as well as in those more obviously altered, through every stage, from simple deposition on the walls of the umbilical vessels, their investing chorion, and the other normal tissues of the placenta, to actual degeneration and disintegration. Dr. Barnes referred to a specimen which had come into his possession, in which the affection presented itself under a different phase; and in which undoubtedly fatty metamorphosis of the placenta had taken place after the death of the fœtus. He should lay an account of this specimen, which still existed, before the Society on a future occasion.

Tuesday, May 27, 1851.

Joseph Hodgson, Esq., F.R.S., President, in the Chair.

Cases of Unusual Difficulty in the Diagnosis of Pleuritic Effusions. By T. A. Barker, M.D. In the first case, there was extensive emphysema of the left lung, which had encroached greatly on the right side of the chest, pushing the heart and mediastinum beyond the mesial line. The right lung adhered closely to the costal pleura, and was reduced to about a fourth of its usual size: it was exsanguine, and contained no air, resembling a lung compressed by effusion in the pleura. In consequence of these changes, no respiration could be heard in the right lung during life: the right side of the chest was universally dull on percussion, and the patient could only lie on the right side, or sit erect. There were other symptoms closely resembling those of hydrothorax; and the dyspnœa, and symptoms of approaching apnœa, being very urgent, a very fine trocar was introduced into the chest, to ascertain whether there was fluid. No inconvenience resulted; and the symptoms were explained, on *post-mortem* examination, by the state of parts above described. The next case was one in which, without any of the general symptoms of pleuritic effusion, it was discovered that there was no respiration going on in the posterior third of the left lung. In four days the person died; the lungs were healthy, but there was extensive effusion, confined to the back part of the chest by a very narrow line of adhesion, extending from the upper and back part of the chest to the diaphragm, half way between the ribs and the sternum. Three other cases were referred to, in which pleuritic effusion had been limited by adhesions in the same position. Two other cases were shortly alluded to, in which there was considerable emphysema, but respiratory sounds could be heard in every part of the affected side, in consequence of the lung being kept partially in contact with the ribs by numerous adhesions, forming several separate cavities in which the purulent matter was contained.

Case in which a Fibro-Cellular Tumour was removed from the Hand. By S. Solly, Esq., F.R.S. A married woman, aged 49, was admitted under Mr. Solly's care into St. Thomas's Hospital, on February 22, 1851, with a tumour on the palm of the left hand, resembling in shape and appearance a large oblong potatoe, the diameter varying from three to five inches, and attached by a broad pedicle. Some patches of ulceration existed, two or three lines deep, having none of the characters of malignant disease. The surfaces bled easily, and were surrounded by a limited blush of redness. The tumour was elsewhere of a pale colour, with small tortuous veins ramifying on it. It had an elastic feel, much like that of encephaloid disease: in some parts giving the idea of fluid, in others being firmer. There had lately been some increase of pain, but it was not constant, and depended much on position. The health had been but little affected. The tumour encroached on all the fingers, but did not prevent flexion and extension, and a considerable proportion of the skin of the palm remained intact. Much difference of

opinion existed as to whether the disease was or was not malignant. Mr. Solly was inclined to consider it as a species of enchondroma. By a grooved needle, some jelly-like stuff was obtained, containing much granular matter, with many exudation corpuscles, and some few spindle-shaped cells, with here and there a common epithelial cell. Mr. Solly removed the tumour on March 1st, 1851. When examined, it had the appearance of an enchondroma of a soft kind. There was a firm, white, dense matrix, enclosing glairy fluid. No true cartilage could be found. Portions of the tumour were sent to Mr. Quekett and also to Mr. Birkett. Communications from these gentlemen show that they agree as to the non-malignant character of the disease. A careful report of the actual condition of the tumour after removal, drawn up by Dr. J. L. Bristowe also tends to the same conclusion. The wound was of a healthy character, and, on the 19th of March, it is reported to have been only one-fourth of its original size. The swelling and tenderness of the fingers diminished, and the back of the hand regained its natural appearance.

Aneurismal Dilatation of the Posterior Tibial Vein, communicating indirectly with the Popliteal Artery. By Edward Cock, Esq. G. M., aged 28, a tide waiter, was admitted into Guy's Hospital, October 30th, 1850, for a large swelling on the back of his leg, which had come on after a long and severe attack of fever. This swelling had all the indications of being a deep-seated abscess under the gastrocnemii muscles. Eleven years previously, his femoral artery had been tied for secondary hæmorrhage following a wound in the popliteal space. He had perfectly recovered from the accident and the operation, and the only inconvenience he ever experienced was a swelling of the superficial veins of the leg, which took place about two years afterwards, and became permanent. On October 3rd, a puncture was made in the swelling, which gave exit to nearly three ounces of dark, grumous, pitchy blood, which did not coagulate, and had evidently been extravasated for a considerable period. Two days after the puncture had been made, nearly a pint of pus escaped from the wound, to the great relief of the patient, and the abscess continued to discharge and diminish in size during a period of twelve days, the man's health and strength daily improving. On November 14, sudden and alarming hæmorrhage took place, to the extent of nearly three pints. The cavity of the original abscess became distended with blood, and infiltration was rapidly taking place into the tissues of the leg, and through the popliteal space towards the thigh. It was judged expedient to amputate the leg above the knee, after which the man got perfectly well.

Examination of the Amputated Limb. In the popliteal space, corresponding with the original seat of injury eleven years previously, there existed a small sac, into which opened the popliteal artery, and to the walls of which were attached the termination of a fibrous cord, which represented the popliteal vein, obliterated up to the line of amputation. Proceeding from the interior surface of the sac were two vessels; the one being the continuation of the popliteal artery, reduced in size, and passing down to be distributed normally to the leg, and the other, the popliteal vein, permeable, dilated, thickened, pouched, and puckered, which passed down, and divided as usual into the anterior and posterior tibial veins. The former was completely obliterated; the latter immediately terminated in an aneurismal dilatation, about as large as a hen's egg, and was situated under the soleus muscle. An irregular opening in the sac communicated directly with the cavity which had constituted the abscess when the patient first came under observation, and which subsequently, (at the time when the hæmorrhage took place), had become distended with blood, derived from the popliteal artery by means of its communication with the vein. All the deep-seated veins of the leg had evidently been long obliterated, and were occupied by solid coagulum, the blood having been returned through the agency of the superficial veins.

MEDICAL SOCIETY OF LONDON.

Saturday, April 26, 1851.

Edward W. Murphy, M.D., President, in the Chair.

Exhibition of a Man who had his Abdomen laid open Thirty Years ago. By Thomas Wakley, Esq. Mr. Wakley exhibited the man, W. W., who, he said, had been for more than thirty years an object of interest to surgeons. A few days ago, he applied at the Royal Free Hospital in consequence of hernia on both sides. He was now about 58 years old. About the year 1823, he was a seaman on board the *Minerva*. The crew had captured three whales, and all hands were employed in "fleuching the blubber", with knives used expressly for that purpose. The fleuching-knives are straight, as long as a scythe, and as sharp as a razor. He had turned from his companions to micturate, and when again returning to his work, the deck being slippery, he fell forwards, with the edge of his fleuching-knife turned upwards. The lower part of the abdomen was completely opened from the anterior inferior spinous process of one side, to that of the opposite side. The intestines protruded on the thighs, and the penis was severed from the trunk. Several bleeding arteries were tied; the intestines were carefully replaced within the abdomen; the edges of the wound were brought together, and retained in juxta-position by numerous sutures: a catheter was passed through the incised urethra into the bladder, and kept there for two months. The bowel was not opened at any part, although the peritonæal covering of the intestine is reported to have been grazed. The bladder was not wounded, owing, of course, to its collapsed condition, as the man had just emptied it of its contents. In less than four months, the parts had quite healed, and the man was able to employ himself in the easy work of the service. Mr. Wakley said, that the case was a very instructive one, showing, under favourable circumstances, what nature (assisted by the surgeon) could accomplish. It was also associated with the names of celebrated surgeons deceased. Sir Astley Cooper, Sir Charles Bell, and others, had considered the recovery so remarkable, that they had lectured to their respective surgical classes upon the case. Sir Charles Bell stated that the man must inevitably become ruptured; and his words have now become verified after more than a quarter of a century. He had only become ruptured within the last two months. Mr. Wakley thought the case unique, as one of a recovery and long life after so severe and extensive an injury of the abdomen.

On Venous Murmurs. By Dr. Ogier Ward. The author began by mentioning the discovery of the sound by Laennec, who, though he had a suspicion that one kind of murmur resided in the jugular vein, yet he was more disposed to attribute the various murmurs heard in the neck to the arteries, and to the bruit musculaire in the platysma and mastoid muscles. M. Bouillaud, who next took up the subject, having attributed the murmurs solely to the arteries, Dr. Ogier Ward was induced to investigate the subject in 1836; and he established it as an indisputable fact, that the sounds in question were produced by the veins alone, though they were modified by the vicinity of the carotid arteries, as regards the internal jugular veins. These conclusions of the author were afterwards confirmed and extended by Dr. Hope and the Committee of the British Association, with a few unimportant exceptions; and were generally admitted by British physiologists, though the French pathologists still adhered to their former opinion. However, in 1843, M. Aran published an elaborate paper on the subject, and induced his countrymen to yield to him an assent which they had hitherto denied to foreigners. From that time the venous origin of the murmurs has been gradually acknowledged in France, and on the Continent generally. The author described the cause of the sound as being the quicker flow

through the veins of blood of abnormal tenuity ; and the difference in the tone of the murmurs produced by pressure of the vessel, to the formation and acceleration of currents in different directions in the vein below the point of pressure. The difference in the sounds produced by shaking oil or water in a bottle is a familiar illustration of this fact, which has been also established by numerous experiments, from which the following law has been deduced—viz., That the increase in the sound is directly as the velocity, and inversely as the density of the fluid. Whenever, therefore, the density of the blood is reduced below a certain standard,—which, however, varies with the individual,—venous murmur is the consequence. Venous murmurs are of two kinds, continuous and remittent ; the former is heard in solitary veins, as the external jugulars ; the remittent murmur is heard in the venæ comitantes, in which the sound is augmented and remits synchronously with the beat of the artery, which modifies it by its pressure on the vein. The external and internal jugular veins afford the best and readiest examples of the sound, from the current of blood being quicker through them in consequence of their ordinary perpendicular position ; but the sound ceases in the horizontal posture, or if the head be lower than the body. On the other hand, the sound is increased, and its tone rises to what is called the "musical hum", by slight pressure of the stethoscope, by which the rapidity of the venous current is augmented ; and also during inspiration from the influence of the same cause. In examining the murmurs, care must be taken to avoid confounding the remittent venous sound with the intermittent bellows murmur that is often heard in the carotids. All observers, both in this country and on the Continent, except the British Association Committee, concur in confining the existence of venous murmurs to persons of weak constitutions, or suffering from disease or loss of blood. Hence it is met with universally in chlorotic and anæmic subjects, whose blood is deficient in several of its constituents, but especially in red globules.

Dr. Ogier Ward having remarked the frequency of the venous murmur in children, whether anæmic or florid, was induced to make a number of observations upon them, and the result he has obtained is, that *all children, male or female, under seven years of age, exhibit the venous murmur.* In girls it generally continues till after puberty and the establishment of menstruation, whether the person be pale or florid. The author has not been able yet to establish the average period of its cessation, either in boys or girls, but from the frequency of its occurrence in adult young women, he believes that a very slight derangement of the general health is sufficient to produce it in them. The greater proportion of water in the blood both of children and females, is a satisfactory explanation of these facts. There is, however, so great a discrepancy in the analyses of the blood taken from such patients, that no exact limits can be assigned to the variations consistent with the health of the individual, as determined by the presence or absence of the venous murmur. With the exception of children, the existence of venous murmurs offers a pretty sure guide to the diagnosis and treatment of various diseases attended with a change in the condition of the blood. In the adult, the author has never met with a case in which tonic remedies were not useful, especially iron, unless the patient laboured under some form of disease that counteracted its influence. The selection of the preparation of iron best adapted to the case, must be guided by the symptoms.

Saturday, May 3, 1851.

Edward W. Murphy, M.D., President, in the Chair.

On some Fallacies in the Modern Practice of Medicine, more especially Homœopathy, and in estimating the Results of Practice by Imperfect Statistical Inquiry. By Dr. Routh. He would not enter on the subject of the theory of homœopathy, but simply on that of the practice—*i.e.*, the argument of experience. To prove this, homœopaths first dis-

figured the allopathic practice, and then advanced on their side statistical tables well calculated to deceive. In defence of rational practice, Dr. Routh adduced chlorosis as an example, in which the blood-globules and the iron contained in them were deficient. In a healthy person the iron varied from thirty-three to forty-five grains—an appreciable quantity, which infinitesimal doses would not congregate in centuries. In the collection of these data, homœopaths overlooked three considerations: 1st. Differences of locality, whereby type, variety, and amenableness to treatment, were greatly affected, illustrating this point by his experience on visiting the continental hospitals. 2ndly. The constitutional or prevailing diathesis of diseases in the same places might vary. The present type of British disease was adynamic; twenty years ago it was dynamic; hence many cases of homœopathic success now. 3rdly. There existed at present a peculiar mental epidemic, as it were, which often tended to effect cures; a tendency to perversion so powerful as, by its influence on the mind, to assist recovery materially. To this cause he ascribed several instances of cures, and astounding results which he had obtained by coloured water. Here was one secret in homœopathic cures. That such was really the case was proved by the failure of homœopathy in the treatment of animals. The real cases of cure were only those in which, if left to themselves, the animal would have recovered, or where a most severe dietetic regimen was also conjoined. These alleged cures also were anonymous, or came second-hand, reported by non-medical persons. The alleged cures of farcy and glanders in horses, extending, as they did, over two to twenty-eight months' treatment, he believed were either not genuine, or chronic cases, where the disease had worn itself out. The argument from children was only negative. This class of patients was most of all susceptible to dietetic regimen.

Dr. Routh then entered largely on the subject of the general mortality in hospitals. The homœopaths gave a result of 4 to 6 per cent. The allopaths, sometimes as low as 2 per cent., gave a result usually of 7 to 9 per cent. This he illustrated by results from the different hospitals in Europe. Amongst the causes of this disparity he had traced the following:—

1st. Homœopaths excluded in their results the cases brought in moribund. Allopaths did not. He showed, however, a table of the mortality from fever in Belfast, from Dr. Mateer. This exclusion, in an average of eighteen years, diminished the mortality 22 per cent., and in 1821, 127 per cent. If it were so for one disease, what would it be for all?

2. Were the cases admitted as severe? Owing to the natural distrust in homœopathy, few severe cases came to them. They went to the allopathic hospitals. He had seen one patient admitted for very slight headache; cases of intoxication, and vast numbers of hysterical cases, were included. This, by increasing the number of non-fatal diseases, necessarily diminished the per centage of mortality.

3. The numbers used were small; and he (Dr. R.) showed, from the Irish tables of hospital mortality, that no returns could be depended upon unless above 10,000. It was said 100 well-selected cases gave good results. He believed, however, from experience, that they were only in the direction of truth. Another 100 cases equally well selected might give a direct negative.

4. Another source of fallacy was the different amount of comfort enjoyed by hospital patients. From personal observation he could state, that Fleichmann's Hospital was unsurpassed in this respect by any other hospital he had seen. The students were either none or few in number, and the patients were not tormented by repeated manipulations.

5. The patients were both younger and of a better class. Out of 320 patients seen in that hospital by Dr. Balfour, 280 were under 40, only 22 above. In the published account for Linz, in 1844, out of 555 patients, 478 were under 40. They were of a better class, not the very poor and weakliest. This he had personally remarked, as had also another Fellow of this Society, Dr. Glück.

The effect of youth in arresting the mortality of disease generally was well-exemplified in the army returns, where, out of some 400,000 admissions, the mortality was only in 1 in 56. In the navy, out of 300,000, 1 in 101.

Dr. Routh alluded to the homœopathic returns from *pneumonia*. Homœopaths were fond of quoting Grisolle's 304 cases, with a mortality of 13 per cent. Dr. Sampson had collected 909 from Briquet, Grisolle, the Edinburgh Infirmary, and Skoda, giving a mortality of 23 per cent. In opposition, Fleischmann's cases were quoted—300, with a mortality of 6 per cent; or from a larger collection, including the results of three other hospitals, 970 cases, with a mortality of 43 or 4 per cent. Many of the reasons above given would explain this; some require, however, particular mention,

1st. Pneumonia in Austria is seldom complicated—usually simple idiopathic. This he attributed to the extreme rarity of Bright's disease of the kidney in that country; and in many returns the complicated were usually classed under the head of the fatal complications, and thus escaped notice. The complicated were only distinguished from the idiopathic in the Linz returns. From 1843-6 there were 93 cases of idiopathic; only eight of complicated: proportion, 8 per cent. In Dr. Tessier's 41 cases, the proportion was 14·6 per cent. In 140 he had collected, occurring in the practice of Drs. Taylor, Walshe, and Peacock, 55 per cent. were complicated. This would explain the difference of mortality. The cases of the Glasgow Infirmary, so often quoted by homœopaths, from 1843-45, were mostly all complicated, chiefly typhoid, and many brought in moribund.

2nd. Age was most important in pneumonia. The mortality was high above 40; low below it, excluding children. The army returns gave the mortality out of 12,000 cases as 1 in 29, sometimes as low as 1 in 45; the navy, 1 in 26, sometimes as low as 1 in 59, out of some 3,000 cases. The best homœopathic return was one in 22; Fleischmann's, 1 in 16; and these were simple cases; the others mixed.

3rd. Sex was another most important feature. The distinction was not made by homœopaths. There were 75 males usually seized by pneumonia to 25 females; but the per centage of mortality among females was more than double. Indeed, by comparison in the Registrar-General's Returns for 1843 and 1844, calculating from 8,000 fatal cases, the different numbers of persons living at each age, the per centage mortality to seizure from pneumonia, excluding children, was 100 males to 211 females. In Dr. Tessier's 41 cases, 3 only were females; and if we took Fleischmann's 19 cases, recorded by Dr. Balfour, as a sample of all, the results from the preponderance of males would be 4 per cent.; too favourable.

Dr. Routh then gave an analysis of Tessier's 41 cases. There were 3 deaths; the cases were, 4 only of double pneumonia, 1 fatal; 30 of simple idiopathic single, 1 fatal; 1 secondary and fatal; 5 complicated. Of these 38 successful, 1 died, before leaving the hospital, of phthisis; another, of erysipelas: giving thus a mortality of 1 in 8. In the 38 besides, 6 had been treated also allopathically, and should be excluded; leaving 35 cases, 5 deaths, or 1 in 7. The cases treated allopathically had a shorter duration of treatment, and left the hospital sooner after convalescence. For so many cases of idiopathic, and with so many males, this was high. On the other hand, the analysis of 141 cases in the practice of Drs. Taylor, Walshe, and Peacock, gave 43 deaths: mortality, 1 in 3; but in this number (141) there were 33 cases of idiopathic single pneumonia, 14 idiopathic double, 2 deaths, among males: mortality, 1 in 23; among the females, 5 of idiopathic single, none of double pneumonia: general mortality for idiopathic, 1 in 25. There were 9 cases of simple pleuro-pneumonia among males, and no deaths; giving a mortality of 4 per cent. only. The remaining were complicated: 52 cases, 30 deaths among males, or 1 in 1·7; 26 cases, 12 deaths, among females; mortality, 1 in 2: total, 78 cases, 42 deaths, or 1 in 1·8. In 127 cases the

age was stated; 61 males under 30, 35 above; 17 females under 30, 14 above; or 78 under 30, 49 above.

After some remarks on the inert treatment observed in such cases by the Viennese allopaths, Dr. Routh concluded by giving examples where under divers treatment, the mortality with Laennec, Wolf, Bouillaud, Louis, etc., had been occasionally very low; adducing also the eleven of Grisolle, cured by emollients only. Declining, however, to deduce conclusions from small numbers, he finished by stating, that idiopathic simple pneumonia under 40 was a very benignant disease; instancing the cures effected by drinking cold water only in many of these cases, as recorded by the Belgian Commission, Drs. Moreta and Compagnani, in Italy. The best treatment in these cases appeared from the researches of Dr. Dietl, of Vienna, the allopathic physician to the Wieden hospital, to be simply the dietetic. Dr. Dietl had treated 85 cases of pneumonia by bloodletting, with a mortality of 20·4 per cent.; 106 by tartar-emetic, mortality 20·7 per cent.; and 189 by simple and strict dietetic regimen, mortality only 4·12 per cent. The bleeding often made the pneumonia complicated. The homœopathic returns should be more carefully analysed before credit was given them; he attributed success to the powers of Nature, and the selection of cases; and, perhaps, even amongst rational practitioners, good might result by trusting more to Nature and diet.

Saturday, May 31, 1851,

Edward W. Murphy, M.D., President, in the Chair.

Galvanic Cataplasms of M. Recamier, by E. J. Tilt, M.D. The cataplasms consisted of galvanic piles, each composed of twelve couples. The couple was formed by a riband of zinc and copper; and each couple was separated by a piece of flannel. On the coloured side was cotton wool; on the other, a piece of gutta percha tissue, to insulate the apparatus. The electrical force generated in the apparatus found vent through the copper rings, to which the insulated copper wire could be attached when the energy was required. In some people, the acrid perspiration was sufficient to increase the intensity of the electric action, but more active effects were produced by wetting the flannels with dilute vinegar, or a weak solution of common salt. An unusual sensation of warmth was felt when one of these cataplasms was tightly bound to the skin; a pricking sensation was felt, and the skin becomes red, when two were placed at a distance from each other, but connected by the wire; and a stronger effect was produced when one was placed over the seat of pain and another on the spine. The apparatus might be worn without inconvenience night and day. It had been successfully used by Professor Recamier in cases of chlorosis and amenorrhœa; and he was trying its effect in sterility probably connected with ovarian disease. He has also employed the galvanic cataplasm with success in the treatment of rheumatic and nervous pains, in a case of obstinate constipation, and in asthma; and a patient with angina pectoris was benefited, but not cured.

Treatment of Febrile and other Diseases through the Medium of the Cutaneous Surface. By William Taylor, Esq. The author expounded his views on the treatment of fever, scarlatina, measles, and by lardaceous inunction. Notice has already been drawn to this subject in the London Journal of Medicine, vol. for 1850, pp. 865 and 970.

This being the last night of the Session, the President delivered a suitable valedictory address, in which he urged Fellows to forward their papers early to the Council, as in future suitable papers only are to be brought forward.

MISCELLANEOUS INTELLIGENCE.

THE JENNER MONUMENT COMMITTEE.

In our last number (p. 587) we alluded to the means which were being taken to erect in bronze, in a suitable situation in London, Mr. Calder Marshall's statue of Jenner, the model of which has been placed in the Great Exhibition. We had hinted that the Committee were backward in coming before the public, and that precious time was being lost. We have since received a most satisfactory communication from the Honorary Secretary. We now find that the delay has been unavoidable, and has arisen from a most praiseworthy resolution of the Preliminary Committee, that the benefits of vaccination not having been confined to Great Britain, but having extended to the whole world, the monument of its illustrious discoverer ought not to be a merely national testimonial, but a tribute to his memory *from all nations*. In consequence of this, applications were sent to many eminent men in foreign parts, asking them to be members of committee and receivers of subscriptions in their respective countries; and sufficient time has not yet elapsed to allow of replies being received to all these communications. These answers, however—all of the most gratifying description—are now rapidly coming in, and the names of the Committee, and the methods and plans for receiving contributions will, we understand, be immediately made public.

The total expense of erecting the statue, with its pedestal and *basso relievos*, is estimated at something under £4,000. When we consider the hearty zeal which the very mention of the scheme has already called forth, we are convinced that the amount of subscription will far exceed this sum; indeed, we do not anticipate that less than £20,000 or £30,000 will be collected; and we should certainly have wished that the Committee had announced the object to which the subscriptions are to go, after the £4,000 has been expended on the specific object of the statue. We find, however, that the Committee are by no means so sanguine as ourselves, and that they think it most prudent to confine their exertions for the present to the one definite object of the statue. At the same time, they wish it to be understood that, in the event of our anticipations appearing correct, they will be prepared to take immediate steps to ascertain the opinion of the Subscribers on any plan for the disposal of the surplus which may be suggested. On the whole, we are not disposed to complain of this determination; more especially when, in the event of the subscription list verifying our prediction, it guarantees the very publication we contended for, which, moreover, would certainly be unnecessary, unless the amount collected exceeds the £4000 required for the statue.

We have been gratified with the perusal of many cordial letters of adhesion received from eminent foreigners; and we regret that our limited space will, in this number, enable us to print but a very few of them: but on a future occasion, we propose to lay before the profession more of these interesting documents, including some of the most gratifying character, just received from the United States.

1. *From the* Chevalier John de Carro, M.D., *of Carlsbad, the friend and first disciple of Jenner.*

My dear Sir,—I am highly flattered by your letter of the 19th instant, about Jenner's Monument. You can place my name on any paper by which subscriptions may be raised. I give you here for that purpose my various titles, of which you can insert what you please.

Chevalier John de Carro, *M.D. of the Faculties of Edinburgh, Vienna, and Prague; Physician at Carlsbad, Honorary Citizen of the same town;*

decorated with the Imperial Austrian Golden Cross with the Crown for Civil Merit; Corresponding Member of the Imperial Society of Physicians at Vienna; Actual Member of the Society of the National Museum of Bohemia.

I take the liberty of sending to you the list of the various proofs of what I have done as *friend and first disciple of Jenner.*

Being perfectly sure that the present generation knows but very little of what I did for India half a century ago, you will oblige me very much, in my old days, in submitting these indisputable facts to those who must feel its advantages there, and to whom their author may not have had the good fortune to make himself known. I shall always be happy to hear from you regarding the progress of your grand enterprise; for though an old man, my activity knows no bounds. Dispose of me and of my good will. So busy as I am as a Spa-physician, I shall always find time for answering your letters, and for doing everything in my power.

Believe me, my dear Sir, with the highest regard, your most obedient humble servant, J. DE CARRO, M.D.

Carlsbad, at Sir Walter Scott's, 1st of May, 1851.

To George Vere Irving, Esq., Hon. Sec. pro temp.,
10, *Ampthill Square, London.*

FACTS.

1. I was born at Geneva in the year 1770, and graduated at Edinburgh, on the 24th June, 1793. I began vaccination on the Continent of Europe on the 10th May, 1799, at Vienna, on my two sons, Charles and Peter, both still alive.
2. In the year 1800, I sent, by Lord Minto (formerly Sir Gilbert Elliot), British Envoy at Vienna, whose physician I was, to the Earl of Elgin, British Ambassador at Constantinople, vaccine matter, which succeeded perfectly on his children.
3. This success having caused a great sensation in some parts of the East, I was desired to send vaccine matter to the British Resident at Bagdad. It arrived fluid, and succeeded. A vaccinated child was sent, immediately after the insertion, to Bassora, where the same thing was done, and a vaccinated child sent on to Bombay; from Bombay all over India, to Ceylon, Persia, etc. etc.
4. Jenner, in his *Continuation of Facts and Observations on the Variolæ Vaccinæ*, 1800, p. 5, attests my priority on the Continent of Europe. Drs. Ballhorn and Stromeyer, of Hanover, who followed my example, dedicated *to Dr. Jenner and to me* the account they gave of their first experiments, published at Leipzig, 1801. Friese, of Breslau, and Nowack, of Schmiedeberg, who received from me their vaccine matter and instructions, dedicated *to me alone* the result of their labours, calling me the *first vaccinator on the Continent of Europe*, and the *most active propagator of the vaccine in Germany*. All of them are long ago no more alive.
5. All the attempts made by Dr. Jenner to transplant his preservative to India failed, very likely for want of precaution in keeping it fluid. Every ship sailing to India was supplied with it, but all in vain. In his despair about it, he offered a reward (from his own purse) of £1,000 sterling. I should have been happy to claim it from a sovereign, or from a government, but never from a colleague.
6. Jenner sent me a silver snuff-box, upon which was engraved "*Edward Jenner to Jean de Carro*" for my European and Asiatic propagation; and he did the same honour to Dr. Benjamin Waterhouse, of New Cambridge in America, being the first vaccinator in the New World! When my jubilee for fifty years of doctorate was celebrated here, on the 24th June 1843, my silver snuff-box, containing a lock of Jenner's hair, sent to me by Dr. John Baron, of Gloucester, his friend and biographer, was deposited by me at the National Bohemian Museum of Prague.

7. The diploma of congratulation, sent to me for my jubilee, by the medical faculty of Prague, is addressed to me as : *viro, scientiâ, scriptis æquè ac factis clarissimo ; immortalis Jenneri amico et proto apostolo, cujus de vaccinatione merita vastus resonat orbis ; medicorum Nestori, juvenili solertiâ insigni.*
8. When Sir Arthur Paget, British Envoy at Vienna, who succeeded Lord Minto, and forwarded my correspondence with the East, knew my first success at Bagdad, he announced it to the East India Company in London, a committee of which voted to me, the 20th of March 1804, *two hundred guineas for the purchase of a piece of plate.*
9. Dr. Milne, who had distinguished himself very much at Bushire in Persia, by spreading vaccination, was transferred to Bombay. Having heard from some traveller coming from Vienna, that I was going to be married a second time, he begged leave to offer to my future wife a pair of Cachemere shawls. He desired Mr. Jonathan Duncan, governor of Bombay, to forward them to Vienna ; but His Excellency refused it, saying that he would take the present on himself, adding to the pair of shawls three pieces of beautiful muslin. The present was voted by the *Honourable Governor in Council*, in the most flattering terms.
10. Our late Emperor Francis conferred on me hereditary knighthood, and his diploma confirms all the merits for vaccination.
11. The present Emperor Francis Joseph has conferred lately on me the *golden cross with crown, for civil merit.* The inclosed description, written by one of my colleagues, relates the festivity of my decoration.
12. The Hospodars of Moldavia and Wallachia, Alexander Moronsi and Constantin Ypsilanti, rewarded me, a great many years ago, by valuable presents, for the introduction of vaccination into their principalities.
13. Ludwig I, king of Bavaria, did me the honour to grant to my eldest daughter the honorary canonicate of the Royal Order of Ste. Anna, a decoration only conferred upon regular proofs of nobility.
14. My third son, Edward, had Dr. Edward Jenner as *god-father.*
15. It may here be a matter of interest to know how I sent the vaccine fluid so successfully to Bagdad : I impregnated with it some dry lint (charpie), which I placed between two flat pieces of glass, one of which had a little cavity ; some mucilage joined them hermetically ; they were tied with pack-thread, sealed with red wax, and the whole of it was surrounded with candle-wax, under the form of a middle-sized apple.

N.B. All these notes are completely at the Committee's service, as well as any further correspondence. LE CHEVR. J. DE CARRO, M.D.

Carlsbad, 1 May, 1851.

P.S. I have published : *Histoire de la Vaccination en Turquie, en Grèce et aux Indes orientales.* Vienne, 1804. Dédié à S. E. M. Arthur Paget, Envoyé Brittanique à la Cour de Vienne. Translated into German by F. G. Friese, M.D. Breslaw, 1804 ; with important additions of the author and notes of the translator.

THE JUBILEE[1] of the fiftieth year of the doctorate, celebrated here on 24th June 1843, in honour of the Chevalier John de Carro, the friend and first apostle of the immortal Edward Jenner, occupies the most honourable place in the annals of the Baths of Carlsbad. Yesterday (19th December 1850), the Order of the Golden Cross, with the Crown for Civil Merit, were conferred, most justly, by His Majesty, our august emperor, on the Nestor of the physicians of Bohemia, or rather of the whole empire, and whom we are proud to reckon among our fellow-citizens. This *fête* has caused true joy to

[1] We give above a translation of this inclosed paper, referred to in paragraph 11. In our Number for February 1851, p. 191, we briefly mentioned the honours which had been conferred on Dr. de Carro.

all our good inhabitants, who know all that he has done to add to the celebrity of Carlsbad, and to make it better known in the five parts of the civilised world.

All his colleagues came to conduct him to the place chosen for the decoration, the *Cabinet des Gazettes* in the house of Mühlbad. This solemn march was accompanied by a most brilliant flourish of trumpets. There the ceremony of decoration took place, in the presence of all the authorities of the town and numerous spectators, in the above-named hall, which was decorated with a portrait of our august sovereign, surrounded with garlands.

When the ceremony was ended, our Nestor, who acknowledged that he owed his perfect health to our Naiads, to whom he had devoted his labours for a quarter of a century, was conducted solemnly, and accompanied by all the witnesses of the ceremony of installation to the Golden Fleece (*Maison de l'Etoile d'Or*), where a large banquet was given in his honour by M. J. P. Knoll, burgomaster of Carlsbad. During the dinner, the band of the regiment of Welden, composed of seventy instruments, executed the most brilliant pieces. The guests warmly responded to the toasts, which were most honourable and fitting to this occasion, and the first of which was our august and youthful monarch. Another was in honour of the illustrious chief of the Imperial armies, Marshal Radetzky, and was followed by the most animated *vivats*. The Austrian Hymn was magnificently performed ; and numerous toasts were given and harangues delivered in honour of the hero of the feast. A collection was made by our worthy dean, for some poor families of the place.

Thus passed the *fête*, remarkable for its perfect cordiality, and an evidence how true merit can be recognised and appreciated. Dr. Mannl.

II. Professor Otto, *of Copenhagen, to* G. V. Irving, Esq.

Copenhagen, April the 20th, 1851.

Sir,—I hasten to inform you, that I feel much honoured by being chosen a member of the permanent committee about to be formed for raising subscriptions to erect a monument to Jenner, and consequently can have no objection to my name being placed on the list. If I can be of any service in my country as to the procuring of subscribers, I shall certainly do my utmost ; but I fear that the many sacrifices which the late war has required, will shut the pockets of many who else would be well disposed to open them for that purpose. Hoping to call on you in London in June,

I am, Sir, with many compliments to Mr. Spring,

Your obedient servant, C. Otto.

III. Professor Schrœder Van der Kolk *to* G. V. Irving, Esq.

Sir,—I felt highly honoured and obliged by your most gracious offer of permitting my name to be placed amongst the honourable men who intend to form a permanent committee for the erection of a statue to the immortal Dr. Jenner, to whom mankind is so much obliged, and I accept it with the utmost gratitude. But since I am not informed what are the duties implied on the committee in question, I beg you to make me acquainted with them. Is it your meaning that I should try to collect subscriptions in Holland for the erection of the proposed statue, or do you wish me to be useful for it in any other respect ? If these requirements do not exceed my powers and means, I shall feel highly glad to concur in the universal acknowledgement of the great merits of Dr. Jenner. A few lines from you on this subject would therefore afford me a great pleasure, and in the expectation of this, I remain with the utmost respect, Sir, your most obedient servant,

Utrecht, 10th April, 1851. J. L. C. Schrœder Van der Kolk.

iv. *From* Dr. Seoane *of Madrid.*

Madrid, May the 8th, 1851.

To John Conolly, M.D., *Chairman of the Preliminary Committee for raising Subscriptions to erect a Monument to* Jenner.

Sir,—It is with great pleasure I have just received your kind invitation to form part of the permanent committee about to be formed for raising subscriptions to erect a statue to Jenner. I hold in the greatest veneration the memory of this great benefactor of mankind, and I believe with the Committee, that it is the duty of all the nations of the earth to contribute for raising a monument worthy of such a man. I shall have, in consequence, much pleasure in doing everything in my power to promote this idea.

I will receive and put willingly in execution the instructions of the Committee ; and I pray you to send me the letters with the directions you will find below, in order that they may reach me without the retard with which I have received your letter ; and if you have to send me any printed papers, I hope you will be kind enough to send them, with my direction, to the Spanish ambassador, to whom I write to-day with this object.

I am, Sir, your most obedient servant, Mateo Seoane.

P.S. A Don Mateo Seoane, Presidente de la primera Seccion del Consejo de Sanidad. Calle del horno de la mata, Madrid.

v. *Translation of a letter from* Dr. J. Müller *to* Dr. J. Conolly.

Honoured Sir,—I have just returned from a journey to Triest, where I have been staying some weeks this spring, in order to continue some observations which I made there last autumn. My answer to your letter, which arrived here while I was absent, is therefore rather late. I can quite understand the feelings which prompt the English physicians to erect a Memorial to *Jenner*. There is no medical service which can be compared to that which he has rendered, with regard to *universality*. And as its effects spread over the whole human race, it deserves our acknowledgment, that the Committee for the erection of the *Jenner Monument* do not confine the subscriptions to the countrymen of *Jenner*, but rather, that individuals of other nations should assist. With regard to your proposal to add my name to the permanent committee, I can assure you that I with pleasure acquiesce in it, and that I feel myself honoured by that participation. Accept, at the same time, the assurance of my exceeding respect for you. J. Müller.

vi. *Translation of a letter from* Dr. de Lima Leitao, *of Lisbon, to* John Conolly, M.D., *and* George Vere Irving, Esq., *London.*

Gentlemen,—I have had the honour to receive the letter which you have written to me, dated the 11th of this month, by order of the preliminary committee, of which you are the President and Secretary, intended to raise subscriptions for the erection, in a public place in London, of the statue in bronze of Dr. Jenner, after the design of Mr. W. Calder Marshall. You invite me to take part in the permanent committee, which is about to be formed for this object. I am deeply sensible of the honour which the respectable committee has thus shewn me. Persuaded that the great discovery of Dr. Jenner, most glorious for England, has been also extremely beneficial, and will always be so, to the whole civilised world, I think that the Committee is performing an act of universal justice, in permitting the whole civilised world to subscribe to a monument worthy of the man who has bestowed on all the same memorable service, by the discovery of vaccination. You may therefore place my name on the list of the permanent committee ; and I beg you to assure them that I will, according to your desire, do all in my power. Believe me, Gentlemen, with respectful esteem, your very devoted servant,

A. J. de Lima Leitao, M.D.,
Professor of Clinical Medicine in the Medico-Chirurgical School of Lisbon.

Lisbon, April 30, 1851.

VII. *From* Dr. Marx *of Goettingen.*

Goettingen, 27 April, 1851.

Honoured Sir,—The honourable invitation to promote the raising a memorial to Jenner, I accept with thanks.

I have seized every opportunity which has on former occasions offered itself, of manifesting the most perfect esteem for the memory of that noble man, and distinguished physician; as well as for his insufficiently recognized services to suffering humanity. The last opportunity I had of doing this was when his biography by John Baron appeared. I noticed this in our literary pages, and made some additions, which may not be uninteresting to the author, if they should come under his notice. My review is contained in the *Göttingischen Gelehrten Anzeigen*, 1839, pp. 92-115.

The political commotions in my country have of late years almost exclusively occupied time, strength, and resources. It is to be hoped that another lively fellow-feeling will soon be roused.

With the assurance of deep respect, Yours humbly, Marx.

The Homœopathic Fellows of the Edinburgh College of Physicians. The Edinburgh College of Physicians consists of Fellows of two classes; the Resident and the Non-Resident. The former pay a larger fee on admission, and have a seat in the College; the latter have no participation in the government or advantages of the institution, excepting the right to call themselves Fellows; but if they subsequently go to reside in Edinburgh, they must, if called on, pay the difference of fee, and *de facto* join the College. It is rumoured that three gentlemen in the Resident List (though two of them only are actually living in Edinburgh) practise homœopathy, and are cut off from professional intercourse with their brethren, by the Resolutions which we reprinted at p. 588 of last number.

1. Dr. William Henderson, Professor in the University of Edinburgh.
2. Dr. William Macdonald, Professor in the University of St. Andrews.
3. Dr. Ransford, once in practice in Edinburgh; then in Alnwick; and now (since his adopting homœopathy), in York.

Dr. Henderson, early in his career, exhibited some talent, and might eventually have taken a good position in the profession; Dr. Macdonald is better known as a transcendental anatomist, than as a practical physician; Dr. Ransford, though not of note or notoriety in any branch of medical science, was well known to the medical profession in Edinburgh, as the bustling and efficient Treasurer of the College of Physicians.

College of Surgeons of Edinburgh and Homœopathy. At a Meeting of this College, held on the 16th of May, the following Resolutions were moved by the President, and unanimously carried. In Scotland, therefore, the homœopathic quacks are now fairly expelled from the ranks of the profession.

1. The College having considered a series of Resolutions, transmitted by the Royal College of Physicians [of Edinburgh] in regard to homœopathy,[1] feel called upon to express their opinion that the system so designated, being entirely inconsistent with the principles professed by candidates for the diploma of the College of Surgeons, any Fellow or Licentiate who practises it, or countenances others in doing so, by meeting them in consultation, will justly incur the disapprobation of the College.

2. That a copy of the above Resolution be transmitted to the Royal College of Physicians.

Signed in name and by authority of the College,

James Syme, *President.*

---

[1] London Journal of Medicine for 1851, p. 588.

The New Hospital for Consumption. The foundation stone of the City of London Hospital in the Victoria Park, was laid on Wednesday the 25th June, by His Royal Highness Prince Albert, under the most auspicious circumstances. After the ceremony, a large and distinguished company partook of a splendid déjeuner. The Earl of Carlisle, the Chevalier Bunsen, and the Bishop of Oxford, greatly enlivened the proceedings, by eloquent and interesting speeches. A blessing on the work was invoked by the Bishop of London. On the 11th of June, 1844, His Royal Highness Prince Albert laid the foundation stone of the sister institution at Brompton.

Brompton Hospital for Consumption and Diseases of the Chest. The authorities of this Institution are at present actively engaged in collecting contributions, for the purpose of completing this edifice. A grand military concert and fancy fair, held on the 18th and 19th June, in the gardens of the Royal Hospital, Chelsea, have, after paying all expenses, cleared we believe, about £1,000. It is proposed to have, this season, another fête, with the view of raising a further sum of money for the building fund.

Mesmerism numbers among its votaries, two illustrious northern Professors, viz:—Dr. Gregory, of Edinburgh, and Dr. Macdonald, of St Andrews. Dr. Macdonald has recently been delivering familiar lectures on the nervous system, at the house of Mrs. Holmes, a fashionable mesmerist, residing at 4, Cork Street, Burlington Gardens.

APPOINTMENTS.

Lane, James, Esq., elected Assistant Surgeon to the Lock Hospital, *vice* Henry Lee, Esq.

Lee, Henry, Esq. (formerly Assistant Surgeon), elected Surgeon to the Lock Hospital.

OBITUARY.

Miller, Dr., F.R.C.S.Edin., late of 32, Buccleuch Place, at 11, Arniston Place, Edinburgh, on the 8th June.

Phillips, Thomas, Esq., late member of the Medical Board, Bengal, founder of the Llandovery School, and of several scholarships in St. David's College, Lampeter, to which College he had for many years been a munificent benefactor; at his residence, Brunswick Square, London, in his 91st year.

Rogers, William, Esq., F.R.C.S.Eng., at his residence, on the 6th June, aged 54. He practised at Great Stanmore, and in its vicinity, for the last thirty years. He was much esteemed.

Rowland, Samuel Baker, Esq., poisoned by hydrocyanic acid, aged 33, at his residence, Walham Green, Fulham. Mr. Rowland was the assistant and successor of the late Mr. Rouse, who perished by the same poison. On two occasions, Mr. Rowland was shipwrecked, and made wonderful escapes.

BOOKS RECEIVED.

Balfour (Edward) Statistics of Cholera of the Madras Army, pp. 70. Madras: 1851. Bennett (John Hughes) on the Mesmeric Mania of 1851. *Pamphlet*; pp. 21. Edinburgh: 1851. Carpenter (Wm. B.) Elements of General and Comparative Physiology. *Third Edition.* London: 1851. Catalogue (Alphabetical and Classified) of Medical and Scientific Works. 8vo., pp. 83. London: 1851. Edinburgh Royal Asylum Report for 1850. Edinburgh: 1851. Holmes on the Sunning Hill Wells. London: 1851. Kirkbride (Thomas S.) Report of the Pennsylvania Hospital for the Insane for 1850. pp. 50. Philadelphia: 1851. Lee (Edwin). Nice et son Climat. pp. 132. Paris et Londres: 1851. Nairn Hospital Seventh Report. Nairn: 1851. Nevins (J. Birkbeck). Translation of the New Pharmacopœia, etc. 8vo. London: 1851. Wagstaff (William R.) on Diseases of the Throat, pp. 183. London: 1851. Wilkinson's Anatomy, Physiology, and Surgery. 12mo., pp. 412. Edinburgh: 1851. Wood (Alexander) on Mesmerism. pp. 31. Edinburgh: 1851.

TO CORRESPONDENTS.

Dr. Grigor's letter regarding the Nairn Hospital; and an account of the Brompton Hospital, are unavoidably postponed.